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GAZETTEER OF THE UNION TERRITORY

GOA, DAMAN AND DIU

DISTRICT GAZETTEER

PART 1 :

GOA

Edited by—

Dr. V. T. GUNE

Director of Archives, Archaeology and Executive Editor and Member Secretary, Goa Gazetteer Editorial Board

PANAJI

GAZETTEER DEPARTMENT, GOVERNMENT OF THE UNION TERRITORY OF GOA, DAMAN AND DIU

1979

GAZETTEER OF INDIA

GAZETTEER OF THE UNION TERRITORY

GOA, DAMAN AND DIU

DISTRICT GAZETTEER

PART I :

GOA

FIRST EDITION : 1979

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*Common for Part 1—Goa, Part 2—Daman and Part 3—Diu.

*Given at the end of Part 3—Diu.

PREFACE

After the Liberation of the Territory of Goa, Daman and Diu on December 19, 1961, systematic efforts were made for the first time to compile the *Gazetteer for the Union Territory* so as to project a comprehensive view of the country and of the people within a defined range in an informative and readable manner.

In this connection the Goa Gazetteer Editorial Board was appointed on 2nd May, 1970, under Government Order No. RD/Est/Gaz/295/69 for the preparation and supervision of the work of compilation and publication of Gazetteer for the Union Territory of Goa, Daman and Diu. It consisted of the following official and non-official members :—

Shri K. N. Srivastava, I.A.S., Chief Secretary to the Government of Goa, Daman and Diu - Chairman.

Padmashree B. B. Borkar—Non-official member and

Dr. V. T. Gune, Director of Archives and Archaeology—Executive Editor and Member Secretary.

Padmashree B. B. Borkar, who was a member of the Editorial Board resigned his membership expressing his inability to continue as a member of the Editorial Board as he was occupied with other assignments. His resignation was accepted by the Government. The work done by Padmashree B. B. Borkar was appreciated and duly noted in the meeting of the Editorial Board held on 24th April, 1971.

Subsequently, the membership of the Board was expanded and Pandit Mahadev Shastri Joshi, Late Prof. G. D. Parikh, Dr. P. N. Chopra, Editor (Gazetteers), Government of India, Ministry of Education and Social Welfare, New Delhi and Dr. B. G. Kunte, Executive Editor and Secretary, Gazetteer Department, Government of Maharashtra, Bombay were appointed as members of the Goa Gazetteer Editorial Board.

It may be stated here that the Board suffered heavy loss as a result of the sad demise of Prof. G. D. Parikh in the year 1976.

The present Board consists of the following members :—

Shri R. M. Agrawal, I.A.S., Chief Secretary to the Government of Goa, Daman and Diu. ... Chairman.

Dr. P. N. Chopra, M.A. Ph.D., Editor, Central Gazetteers Unit, Ministry of Education & Social Welfare, Government of India, New Delhi. ... ... Official Member.

Pandit Mahadev Shastri Joshi, Pune.	Non-official Member.
Dr. B. G. Kunte, M.A. Ph.D. (Econ.), Ph.D. (Hist.), Executive Editor and Secretary, Gazetteer Department, Government of Maharashtra, Bombay	Non-official Member.
Dr. V. T. Gune, M.A Ph.D., Director of Archives and Archaeology, Panaji, Goa	Executive Editor and Member Secretary.

Shri S. K. Gandhe, Director of Planning and Statistics, is a permanent *invitee of the Editorial Board.*

After the transfer of the then Chief Secretary, Shri K. N. Srivastava, Shri T. Kipgen, Chief Secretary looked after the work of the Gazetteer. Consequent upon the retirement of Shri T. Kipgen as Chief Secretary, Shri R. M. Agrawal is now looking after the work of the Goa Gazetteer.

I express my gratitude to Smt Shashikala Kakodkar, Chief Minister of Goa, Daman and Diu for her keen interest and guidance in the Gazetteer work. I am also thankful to Shri Pratapsing R Rane former Minister for Law and Labour who took keen interest in the progress of the Gazetteer work.

I will be failing in my duty if I do not express my thanks to Dr P N Chopra, M A. Ph D., Editor, Central Gazetteers Unit, Ministry of Education and Social Welfare, Government of India, New Delhi, as also the staff of the Unit for their effective role in planning and co-ordinating the work of preparation of the District Gazetteer Volume The Unit scrutinised the draft of this volume with great care and made several helpful suggestions with a view to improving the standard and quality of the publication. It may also be mentioned here that the Government of India has borne the entire expenditure on the compilation and printing of the District Gazetteer Volume, as the same was implemented under the Centrally Sponsored Scheme, without which the publication of this volume would not have been possible. The typed manuscript was sent for printing after receiving the approval of the Central Gazetteer Unit, Government of India, New Delhi.

My special thanks are due to Dr B G. Kunte, Executive Editor and Member Secretary of the Gazetteer Editorial Board, Government of Maharashtra, who has been kind enough in giving his guidance in the Gazetteer work from its very inception. Shri S A. Sapre, Director, Government Printing, Stationery and Publications, Bombay, Shri G. D. Dhond, Manager, Government Central Press, Bombay, as

also the other technical and managerial staff deserve my thanks for the execution of the printing work of this Volume. I am also thankful to the Manager, Government Photozincographic Press, Pune, for printing the coloured maps of Goa, Daman and Diu districts.

My special thanks are due to Shri M. H. Ranade, former Research Officer in this Department whose services were made available by the Gazetteer Department of the Government of Maharashtra for about 3 years, for the assistance he has rendered to me in the setting up of the Department and also in the collection of data and compilation work of a number of chapters of the Goa Gazetteer. Shri S. H. Bhat, Statistical Assistant from the Department of Planning and Statistics, was also associated with the work of the Goa Gazetteer Department since its inception and assisted me in the work of the Gazetteer for more than 6 years and I am thankful to him for his assistance.

The members of our staff namely Shri Bonifacio Dias, Assistant Research Officer, Kum. Kusum Amonkar, Research Assistant, Smt. Priya P Nagvenkar, U.D.C., Smt. Jesseline Britto, Junior Stenographer, Smt Milena Dias, L.D.C and Shri Antonio Gomes, who rendered concerted and sustained assistance are sincerely thanked

I also acknowledge with gratitude the co-operation of various departments of the Government of Goa, Daman and Diu in making available the necessary data as well as to the officials and non-officials and heads of Institutions and Industries, who helped us by supplying information on various points and without whose help the execution of this work would have been difficult To them all my thanks are due.

V. T GUNE.
Executive Editor and
Member Secretary.

Panaji
7th Chaitra, Gudi Padwa,
Saka 1901.
28th March, 1979

ACKNOWLEDGEMENTS

In preparing this Volume of the Gazetteer of Goa, Daman and Diu, I am indebted to the officers of the Union Territory at different levels, individuals and institutions. My heartfelt thanks are due to all these persons and institutions. Particular mention may, however, be made of the Collaborators, Professors and other learned persons who have contributed in writing up various sections of the Gazetteer Volume. A list of the names of the Collaborators along with their contribution to the Goa Gazetteers is noted below. We are thankful to the Collaborators for their valuable contribution.

	Name	Contribution
1.	Dr. C. D. Deshpande, Prof. & Head of the Department of Geography, University of Bombay, Bombay.	Geography.
2.	Department of Observatories (Climatology and Geo-physics), Pune.	Climate.
3.	Dr R. S. Rao, Deputy Director, Botanical Survey of India, Central National Herbarium, Howrah.	Flora.
4.	Dr. P. G. Deoras, Scientist, Bombay.	Snakes.
5.	Dr. V. T. Gune, Director of Archives and Archaeology and Executive Editor, Panaji, Goa.	Pre and Proto History, Ancient History and Part of Medieval History of Goa, Daman and Diu Districts (Since before Christian era till the arrival of the Partuguese in India).
6	Dr. B. S. Shastri, Reader in History, Centre of Post Graduate Instruction and Research, Panaji, Goa.	Portuguese Period 1510-1780.
7.	Dr. B. K. Apte, Reader in History, Centre of Post Graduate Instruction and Research, Panaji, Goa.	Portuguese Period :— *Strugle for Freedom* 1780-1947.

Name	Contribution
8. Shri B. D. Satoskar, Caranzalem, Goa.	Portuguese Period :— *Nationalist Movement* 1947-1961. and Write-up regarding Hindu customs and festivals, etc.
9. Late Shri Evagrio Jorge, Editor (Uzvadd), St. Inez, Panaji.	Write-up on Christian customs and traditions, fairs and festivals.

GENERAL INTRODUCTION

The Gazetteer as it is now understood, presents within a defined range and in a readable manner comprehensive view of the country and of the people. It is a repository of authentic information about the development of life in a district from its geographical, demographical, social, historical, economic, administrative and cultural aspects. It is thus of great value as a reference book to an administrator, scholar and a general reader. The information is classified and arranged into District, Provincial or State and Imperial or National Series of Gazetteers according to its scope and general importance.

Under orders of Emperor Akbar, his learned Courtier Abul Fazl compiled '*Akbar Namah*', which is considered to be the Gazetteer and Manual of Administration of Mughal Empire of India during later parts of the 16th century. Systematic modern Gazetteer literature developed in the Western countries in the wake of the intellectual ferment brought about by the Renaissance and the Industrial Revolution. The colonial British Government prepared the Gazetteers of their Indian Empire into Imperial, Provincial and District Series by the end of the last century. These are now being revised by the respective States (former Provinces) under the guidance of the Gazetteer Unit of the Ministry of Education and Social Welfare, Government of India, New Delhi. Some of the States have already published Revised editions of the District Series.

During the British regime, the Government of Bombay Presidency had published as early as 1855 '*Selections from the Records of the Bombay Government*' No. X New Series wherein Captain Joaquim J. C. Kol, made an attempt in Part 2 of the same Selection to compile the first *Statistical Report on the Portuguese Settlements in India*, giving therein valuable information of the then districts of Goa, Daman and Diu.

Similarly in 1878, under the authorization of the then Government of Bombay Presidency a book entitled 'An Historical and Archaeological Sketch of the City of Goa' was published by Shri Jose Nicolau da Fonseca, which contained authentic and useful information on several aspects of life in the territory.

The history of the Portuguese Empire was written by Court Chroniclers during the latter part of the 16th century A. D No attempt however was made by the Portuguese to prepare a comprehensive Gazetteer of Goa, Daman and Diu, as was done by the

British rulers of India. This is, therefore, the first attempt at the compilation of a comprehensive Gazetteer for the Union Territory of Goa, Daman and Diu.

An important step in this direction was taken when an *Ad-hoc* Committee consisting of experts was created in October, 1969 under the Chairmanship of Chief Secretary to advise the Government in the preliminary steps to be taken for the compilation of Gazetteer and also setting up suitable machinery for the implementation of the work of Goa Gazetteer.

As suggested by the *Ad-hoc* Committee, two Sub-Committees were formed to look after the work of i) Standardisation of Spellings of place names of the Union Territory of Goa, Daman and Diu as written in Devnagari and Roman scripts and ii) Translation of some Portuguese reference material into English. It also suggested the formation of a wider body i.e., General Advisory Body of Goan experts in various fields so that information recorded in the Gazetteer would have a broad base and would reflect various views and outlooks on the different facets of life of the territory.

The *Ad-hoc* Committee recommended that the Goa Gazetteer should be in two volumes viz. (i) History Volume and (ii) District Volume. Accordingly draft outlines of the History Volume was prepared by the Executive Editor and the contents of the District Volume were drawn on the basis of all India pattern adopted at the State Editors Conference held in Delhi on 31st July 1962 with some modifications to suit the local conditions in the Union Territory and these were placed before the members of the Committee for their expert views and suggestions on it.

The General Advisory Body in its meeting held in May 1970 approved the draft outlines of the Gazetter prepared by the Executive Editor. It also finalized the Spellings of the Place names in the Union Territory drawn up by the Place Names Committee, in its meeting held in October, 1970.

In the meantime, Goa Gazetteer Editorial Board was constituted under Government Order No. RD/Est/Gaz/295/69 dated 2nd May, 1970, for the preparation and supervision of the work of compilation and publication of Gazetteer for the Union Territory of Goa, Daman and Diu. The Gazetteer scheme formed part of the Non-Plan sector of the Goa Administration. However, as directed by the Ministry of Education, Government of India, the scheme of the compilation of Gazetteer was included in the Centrally Sponsored Plan Scheme of the Government of India from 1st April, 1972 and was financed by the Government of India entirely.

The scheme was prepared by the Gazetteer Editorial Board and was discussed with Dr. P. N. Chopra, Editor (Gazetteer), Ministry of Education and Social Welfare, Department of Culture, Government of India in April 1972. It was decided that the Gazetteer of Goa, Daman and Diu should be compiled in one District Volume divided into three parts, one each for Goa, Daman and Diu. It was to be compiled as per the directives issued by the Central Gazetteer Unit, Ministry of Education from time to time.

The present edition of the Gazetteer of the Union Territory of Goa, Daman and Diu consists of one Volume divided into three parts seperately for Goa, Daman and Diu districts. In order to make it handy, Part 2—Daman and Part 3—Diu are bound together separately. Plates, Abbreviations and Select Bibliography are added at the end of Part 3—Diu. The pattern of the compilation of the District Volume was strictly followed as laid down by the Central Gazetteer Unit, Government of India, New Delhi. The scheme of the contents were drawn on a uniform basis in order to exercise unified central direction and control over the scheme, though the account of particular items varied considerably from district to district. Information was collected from Government offices and in respect of social and religious practices from reponsible citizens. Eminent scholars, experts, collaborators and administrators contributed articles on special subjects.

In this dynamic world, circumstances and facts of life change, and so do national requirements and social values. Such significant changes have taken place in India as in other countries during the last half a century, and more so after the advent of Independence in 1947, and Liberation of the Union Territory of Goa, Daman and Diu in 1961. The general scheme and contents of this edition of Gazetteers have been adopted to the needs of altered conditions.

In this edition, therefore, an attempt has been made to give an idea of the latest developments whether in regard to the administrative structure or the economic set up or in regard to social, religious and cultural trends. Every attempt has been made to incorporate an up-to-date information as possible. However, in a monumental work like this, a time lag between the date of collection of information and its publication is inevitable.

The draft chapters of the Gazetteer Volume have been duly scrutinized by the Central Gazetteer Unit, Ministry of Education, Government of India, other concerned Ministries and the members of the Goa Gazetteer Editorial Board and their valuable comments and suggestions have been duly incorporated in the final draft of the Gazetteer volume.

An important feature of this publication is the Directory of Villages and Towns and a list of spellings of Place Names given at the end of

each part of the District Volume. The Directory of Villages and Towns contains in tabular form useful information about every village and town in the district.

A list of different spellings of Place Names as approved by the Government of the Union Territory of Goa, Daman and Diu, Survey of India, General Advisory Body of the Goa Gazetteer Editorial Board and as written in the Devnagari script are also given soon after the Directory of Villages and Towns. The Spellings of Place Names as adopted in the Gazetteer Volume are followed as per the Spellings of Place Names approved by the local Government. The district coloured maps each for Goa, Daman and Diu districts given in this edition are also fairly large and up-to-date.

Suggestions from the public, if any, towards the quality and coverage of information are welcome and will be incorporated as far as possible in the revised edition of the present Gazetteer Volume.

V. T. GUNE,
Executive Editor and
Member Secretary.

Panaji :
7th Chaitra, Gudi Padwa,
Saka 1901.
28th March, 1979.

PART 1—GOA

PART 1—GOA

CHAPTER 1—GENERAL

ETYMOLOGY OF THE NAME OF THE DISTRICT

Goa is properly known as *Gowa* or *Gova*, in Marathi *Goven*, in Konkani *Goem*. The Madras Glossary connects it with sanskrit '*go*', a cow in the sense of cowherd country.[1] It is the abbreviation of the term *gomant*. The reference to the people known as *gomantas* is traced in the 9th canto of the Bhishmaparva of Mahabharat Purana.[2] The usually accepted derivation of the term *gomantaka* is from *go+manta+ka; go* meaning cattle, *gomanta* meaning herd of cattle-owners with *ka* as *taddhita* affix added to the noun to express diminution, deterioration and similarity.[3]

There is a reference to a mountain known as '*Gomanchal*' in the Harivamsha Puran, where it is said that, in a fierce battle between Shrikrishna and Jarasandha lord of Magadha, the King of Magadha was totally defeated.[4] *Gomanchal* is analogous to *Gomantha Durga*, which is referred to in the Kolhapur charter of the Shilahara king Gandaraditya of saka 1037 (A.D. 1115). It is learnt from it that the Shilahara king Jatiga, the founder of the Kolhapur branch of the Shilaharas had acquired the lordship of the *Gomantha Durga* by defeating the Gang King Parmadi Narasinha sometimes during A.D. 950.[5] This is the earliest known record wherein the word *Gomanth* appears for the first time. The territory surrounding the Fort must have been known as *Gomantak*.

History of the District as an administrative unit and changes in the component parts.

Before the advent of the Portuguese, the district covered very extensive areas on its borders, which included towards the north, part of the Ratnagiri district of the Maharashtra State then known as Kudal and Rajapur Mahals upto the river Kharepatan. The southern limits extended towards Ankola and comprised ancient Mahals of Supa, Halyal and Karwar, now forming part of the North Kanara district

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1. Henry Yule and A. C. Burnell — *Hobson-Jobson*, p. 379.
2. *Mahabharat, Bhishmaparva* Canto 9th
3. V. R. Varde Valaulicar, some Marathi articles, p. 282.
4. *Harivansha, Chap. 96-99.*
5. Khare, G. H. *Sources of the Medieval History of the Deccan*, Vol. 1, p. 35.

of the Karnataka State. Towards the east is covered large portion of the Belgaum district.

The area of the territory of Goa, Daman and Diu has remained almost constant during the course of about 200 years. The administrative divisions in force in the district of Goa were subject to various alterations. In 1881, for the convenience of administration, the district of Goa was formed of nine concelhos namely Tiswadi, Salcete, Bardez, Pernem, Sanquelim, Ponda, Sanguem, Quepem and Canacona. These concelhos constituted each a province known after its own name The concelho of Sanquelim covered the provinces of Bicholim and Satari, that of Sanguem of Hemadbarshe and Astragrar and that of Quepem the province of Bali, Chandravadi and Cacora. In the same year, the district was composed of 9 concelhos, 14 provinces, 2 towns, 2 villas and 100 villages. The concelho of Sanguem was further divided into the concelho of Sanquelim with an only province of Bicholim, and the concelho of Satari formed the province of the same name by the Provincial Order dated 30th October, 1897. In 1917, the concelho of Salcete was separated forming the concelho of Mormugao.[1] In 1947 the concelho of Sanquelim was named as the concelho of Bicholim. The evolution of administrative divisions of the district during the census years from 1881 to 1960 is given in Appendix 1.

The district of Goa is thus divided into 11 Concelhos or taluka viz. Tiswadi, Bardez, Pernem, Bicholim, Satari, Ponda, Sanguem, Canacona, Quepem, Salcete and Mormugao. The number of revenue villages in the talukas of Goa district ranges from 9 to 77. The administration of the Union Territory of Goa, Daman and Diu is headed by the Lt. Governor, advised by a popular ministry. The administration of the Goa district at District level is conducted by the Collector of Goa who also functions as District Magistrate. The taluka level administration is looked after by the Mamlatdars. The Mamlatdar also exercises magisterial powers in addition to their duties as revenue officers.

GEOGRAPHY *

Location and Boundaries

The district of Goa has an area of 3,701 square kilometres and a population of 7,95,120 as per the Census of 1971, and its geographical position is marked by 15°48′00″ N and 14°53′54″ N Latitude and 74°20′13″ E and 73°40′33″ E Longitude. The boundaries of the district partly confirm to geographical features. In the North, Goa shares its boundary with the Sawantwadi taluka of Ratnagiri district and Kolhapur district of the Maharashtra State; the mouth of the Tiracol

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[1] Decree No. 3337 dated the 6th September, 1917.

* This section has been contributed by Prof. C. D. Deshpande, Dept. of Geography, University of Bombay, Bombay.

river lies within Goa and includes the Tiracol Fort, across the mouth. The riverine boundary of the Tiracol stretches eastwards to a distance of 26,600 kilometres and is shared by the Ratnagiri district of Maharashtra ; then onwards, the land boundary extends continuously to a length of 1,56,300 kilometres to the East and South, and is shared by the Kolhapur district of Maharashtra and Belgaum, Dharwar and North Kanara districts of the Karnataka State. Here it accords over several stretches with natural features of the Sahyadrian watershed. On the West, the Arabian Sea boundary extends to 1,32,900 kilometres from the Tiracol Fort to the southern extremity of a peak 111·8 metres high just west of Polem on the Goa-Sadashivgad road.

Physical Features

Goa, being a part of the West Coast region of India, has many physical features that are common to the neighbouring regions of the Maharashtra and Karnataka States. But there are also some features which land the landscape and scenery of Goa a distinctive charm of their own. Broadly, there are three main physical divisions of Goa : mountainous region of the Sahyadries in the east which serves over the major part as a watershed between the Arabian Sea and Bay of Bengal drainage and demarcates the administrative boundary with a part of the Kolhapur district of Maharashtra, the Belgaum and North Kanara districts of Karnataka, the middle level plateaus in the centre with their detached elements abutting in several places into the sea, and the low-lying river basins and the coastal plains.

Physical Geology

The present landforms of Goa could be explained with reference to its geological base. Geologically, a substantial part of Goa belongs to the basaltic outflows of the Deccan Lavas, and has accordingly the typical landforms consisting of flat topped summit levels with terraced flanks, and wide opening valley courses with sides rising more as a succession of steps than as smooth slopes ; the Sahyadrian scarp, steep and in many places bold, has been regarded as due to major faulting which created the western flank of the Sahyadri as a whole The topography of the basalts in its details is due to weathering and water erosion on an intense, though highly seasonal scale ; so, residual hill features with rounded summits like the Chandranath hill, and minor knolls, are common in the mountain tract of Goa. Extensive laterisation, attributed to the tropical moist climate with vast seasonal changes is another interesting and significant feature of this landscape. Both in the high Sahyadries and in the medium and low level plateaus below, laterite caps are extensive, and these are associated with iron and manganese deposits of Goa. There are limited outcrops of older

rocks, metamorphic schists and shales, mostly belonging to the Dharwar series of the geologist. More important are the recent alluvia spread along the courses of rivers and the coastal plains. These and the sandy deposits along the coastline are the most recent formations.

The Sahyadries of Goa

The portion of the Sahyadries lying in Goa has an area of about 600 square kilometres and an average elevation of 800 metres. Its crestline extends almost as an arc and is about 125 kilometres long. If one looks eastwards from the plains of Goa towards the Sahyadries, they form on the horizon almost a wall with peaks occasionally jutting out, connected with saddles below, and clad in azure blue, with mists dominating especially during the rainy season. Most of the peaks are known by traditional names. The water-divide acts as a source region for most of the Goan rivers. The scarp face is furrowed by ungraded streams, many of which in the steep fall, have waterfalls. The Dudhsagar waterfall is the most well-known of such cascades. Of the isolated peaks with which the ranges of mountains are studded, the most conspicuous are : on the north, Sonsagar, 3,827 feet above sea-level ; Catlanchimauli, 3,633 feet ; Vaguerim, 3,500 feet ; Morlemchogor, 3,400 feet, all in the Satari taluka ; on the east and west, Siddhanath at Ponda, Chandranath at Paroda, Consid at Astagrar and Dudhsagar at Latambarcem.

The Plateaus

The central portion of Goa consists, by and large, of plateaus at varying levels, not exceeding about 100 metres and not less than 30 metres. Occasionally, they are merely worn out stumps.

The plateaus have typical landforms that are quite characteristic of the Goan scenery : the tops are fairly level, but are in places deeply notched by gullies ; the plateau rims are noticeably sharp ; a scarp slope usually marks the quick transition to the alluvial plain below. On the coastline, the lateritic plateaus end in headlands ; the Aguada, Cabo and Mormugao heights are leading examples which have their counterparts both along the coastline to the north and the south. The plateau tops with their laterite cover present a forbidding appearance of scrub and rough grass due to their very shallow soils, usually developed in patches, as exposures of hard, slangy, magenta coloured laterite. Locally known as 'Jamba', lateritic is extensively used for house construction and compound walls, because it can be easily cut and dressed when quarried and it soon gets hardened on weathering While the plateau levels are flat, bare and rolling in topography, the scarp faces and the hollows of gullies support good vegetation cover of strands of typical monsoonal forests ; the gullies in particular are

verdant regions with many springs feeding the rivers down below. The laterite plateau with clumps of grass and thinly spread cashew shrubs, often with a church or a cross perched, skirted by greenery of coconut palms and natural growth, deeply entrenched notches of low ground of betel and coconut gardens, the *Kulagars*, and the plateau base sharply merging into the alluvial flats below, form a recurrent theme in the landscape of most of Central and Coastal Goa.

The river basins and the coastal alluvial flats

Quite in contrast to the lateritic plateaus and abundant in their usefulness are the alluvial lowlands of Goa. These are the infilled stretches of the rivers which have deposited the eroded material from the Sahyadrian elevation along their banks, on losing their gradient when they emerge from the highlands to meet the sea. The major riverine plains in Goa are those of the Mandovi and Zuari which, together, constitute a major alluvial embayment in the otherwise narrow and uneven aspect of the whole Konkan Coastland. Those of Chapora in the north, and of the Kushavati and Sal in the south are lesser basins. Along the coastline these basins develop alluvial flats behind sand bars to develop rich agricultural tracts.

The coastline of Goa is a scenic alteration of bays and headlands significantly broken by the large estuaries of the Mandovi and Zuari, and interspersed with minor estuaries. Of the bays, the Baga, Calangute and Colva are extensive curved stretches which with their near white sands and palm fringes form one of the main tourist attractions of Goa. The headlands, on the other hand, have played a significant role in Goa's history as sites of forts and landmarks for marine and coastal navigation. The Aguada on the northern bank of the Mandovi, with its adjacent Reis-Magos and the Chapora Fort at the mouth of the Chapora river were important as strongholds in the Portuguese colonisation so was the Cabo on the southern bank of the Mandovi, and it still serves well as the residence of the Lt. Governor of Goa, Daman and Diu. The crumbling fortifications on the Mormugao plateau overlooking the harbour are a reminder of the historic importance of this headland. The Cape Ramas in the south is another headland.

The island of Goa are of two types : the rocky islands like those off the Mormugao coast and the Piedade right in the estuary of the Mandovi (and the Anjidiv, too, belongs to this type) which are the protrusions of a drowned topography separated from the mainland of faulting. The other types are the alluvial islands like those of the Cumbarjua group created by the heavy deposition of silt by the rivers in their estuaries. Many of these alluvial islands are not so obvious in the landscapes as they are now connected by roads and bridges.

Lakes

Lakes constitute a scenic feature in Goa, though most of them have a limited and local use for irrigation. Most of them owe their origin to bunds across stream valleys, large and small, and along plateau margins and in alluvial flats. The lakes that are to be found immediately behind the coast are mainly due to the diversion of the estuarine streams by sand bars and filled in alluvium on the flats behind the sand bars ; here, the lakes appear as detached remnants of marsh and flats ; such are the several lakes of the Sal basin, south of Margao ; similar shallow stretches occur in the alluvial flats of the Tiswadi , so indeterminate is the expanse of fresh water in such lakes that the transition to rice lands and salt flats is hardly noticeable. The lakes of the interior are mostly impounded creations in the small streams and serve as a valuable irrigation course to rice lands and betelnut gardens. The more important of the lakes of Goa are Maem, Chimbel, Carambolim, Calapur, Cacora and Curchotem.

Rivers

Of the many rivers and streams that drain the land of the district, the Tiracol, Mandovi, Zuari, Sal, Talpona and Galgibag, are most important because of the extent of their drainage areas and the human attraction they hold.

Tiracol.—The Tiracol rises in the Karnataka part of the Sahyadries and flows along the border of Goa over a stretch of 13 kilometres. Except for the Tiracol Fort tract on its right bank, only the left bank portion lies in Goa. The river traverses a wide course and is flanked by plateaus of medium heights.

Chapora.—The Chapora river has its sources in the Ram Ghat hills of the Belgaum district in Karnataka. Its length in Goa is about 31 kilometres. It enters Goa as a wide and meandering stream flanked by plateau heights and tributary valleys, it has several islands in its water course. Downstream, near the mouth, the river basin shows features of a drowned topography. The low level alluvial flats form highly concetrated patches of cultivation.

Mandovi.—The Mandovi takes its rise in the main Sahyadries of the Karnataka State. With rivers Rogaro and Kushavati as the main left bank tributaries and the Nanorem, Nanus, Valvota and Mapusa as the main right bank tributaries, the Mandovi has the largest drainage basin in Goa. In Goa, the river has a length of about 77 kilometres and a wide meandering course through the irregular and increasingly plateaulike forms. The river course is dotted with islands in the stream. After a rather restricted course through a flat topped range, the river emerges into a more open valley, and from Bembol to Piligao takes a north-westerly course for about 17 kilo-

metres. Receiving the waters of the Valvota and many smaller streams, it develops a broad and slow moving course. Its swing towards the west to meet the Arabian sea is accompanied by remarkable changes in the landscape and drainage ; once again here we see the typical features of a drowned topography with the Island of Divadi standing prominently in the mid-course with its northern counterpart, the Island of Chorao, not looking so prominent as an island because it is on the right bank of the Mandovi and is encircled by the small but complex network of the Mapusa drainage. These and some other islands are rocky projections of basalt, but the land surface of the outcrop core has been peripherally extended by heavy siltation upto the present edge of the river water. Siltation of the fringe of the estuaries of Mandovi and Zuari as well as around the rocky island cores has produced prograded level surfaces in the form of alluvial islands. In fact, the Island of Tiswadi like that of Divadi with a rocky base is an island with numerous alluvial counterparts in the east, and the Cumbarjua canal must be regarded as a remnant of a much wider water surface of the past. The drainage and low level landscape features of the Mapusa basin show identical aspects, though on a smaller scale.

Of the tributaries of the Mandovi already mentioned, the Mapusa network of drainage and that of Candepar river are more important. The Mapusa drainage flow to the main river consists of threaded and ill-defined streams in broad, flat and in some places marshy levels skirted by the Nandoli-Porvorim-Mapusa-Assonora-Sirigao plateau heights, and shows that the whole low level tract is an infilled alluvium, fed by waters as well as debris by the steep down-cutting rivulets of the plateau rims, of which the Assonora stream is the longest. The Candepar, on the other hand, runs through a hilly course ; first through the Castlerock heights of the Karnataka region, and then with a steep ungraded course in the Sahyadrian flank through the scenic Dudhsagar Falls. From thence also the course runs in a deep valley to some distance till near the village of Colem. Further downstream the valley opens out and the river meanders to reach its confluence with the main river near Bembal. As with the other river valleys of Goa, the valley of Candepar is broad and has alluvial embayments, it is dominated by plateau heights occasionally carrying peaks that are prominent in the landscape. The Candepar, however, claims a larger drainage area through its tributaries in the south, draining the lands of north Sanguem and Ponda.

Zuari.—The Zuari is the southern counterpart of the Mandovi, and the twin estuaries of these rivers, close together and wide and navigable have made Goa what it is. The Zuari's source waters lie entirely within the district of Goa, with the inter-State boundary

almost following the water divide. The longer stream draining the hilly area of south-west Sanguem must be considered as the main stream. From the source region to its confluence with the Talaulim stream on its right bank, the river has a length of 34 kilometres and a meandering but entrenched course with wide valley sides abutted by heights, initially simulate high hill landscapes and progressively assume westwards plateau forms at various levels. Peaks are prominent even on the plateau forms. Below the confluence, on which is situated the town of Sanguem, the river further broadens out and receives on the left bank the waters of its main tributary the Kushavati. The drainage area of the Kushavati is large and what is more important, it consists of good stretches of alluvial land, studded with subdued plateaus here and there, with the Chandranath hill in prominence. From Sanvordem downstream, the river develops alluvial flats and marshes on either side, these are more extensive on the left bank. With the broadening of the river into an estuary, the alluvial land, the more so the tidal flats have wider extensions, particularly in the Cumbarjua canal belt. Below Cortalim, the estuarine mouth is abutted by prominent plateau heights of Bambolim and Cabo on the north and Cortalim, Dabolim and Mormugao on the south, with few small enclaves of alluvia. The area shows what must have been the landscape of the coastal region of Goa of projections of island plateaus in an expanse of water before alluviation. The process of linking with the mainland by alluvial and sandy extentions is well seen in the Island of St. Jacinto just north of the Dabolim plateau. In contrast, the Island of St. George, Pegay and Kambari are prominent deteched plateau remnants standing out in the open sea south-west of the Mormugao plateau. The harbour site of Mormugao can be explained in terms of a drowned topography with the plateau height offering protection and the depth of waters providing anchorage to ships, though the site had to be improved and extend by a see wall on the side of the open sea.

Groundwater conditions

Most of the area of Goa is covered by laterite with a few outcrops of Pre-cambrian rocks which comprise the bed rocks, occurring at depths between 15 and 27 m. In Panaji the bed rock occurs at 22 m. below ground level, in Betim at 27 m. in Nerul at 15 m. on Ponda and Margao sides on Borim bridge of Zuari river at 20 m. in Mopa plateau at 15 m. and in Curchorem at 15 m.

Development of groundwater is restricted mostly to domestic purposes. Almost all the wells penetrate laterite and the underlying lithomarge only, which form the main water yielding formations (aquifers) except those around south-east of Sanvordem where the

wells end and in either quartz chlorite schist or granite gneiss and in the north-western part where the wells pierce through schistose rocks. Groundwater occurs in these formations under water table conditions and the depth of water table is controlled by topography. In plateau area and high grounds, the depth to water table varies between 8 and 22 m. below ground level, whereas the depth to water table varies from 1 to 8 m. below ground level in low grounds and valley bottoms.

The quality of groundwater is generally good, excepting the coastal lowlands where problems of salinity are encountered. In general, the chloride content in the groundwater is within 50 ppm. The groundwater is soft, the hardness (as $CaCo_3$) being mostly within 70 ppm

The Vegetal Cover

What lends the district of Goa its scenic charm must be principally attributed to its vegetal cover consisting of three main categories; the typical tropical monsoonal forests of the Sahyadrian Ghats and their extensions along the projecting hill ranges towards the coastlands, the poor cover of grass and scrub on its lateritic plateaus, and the fringing belts of vegetation along its estuaries and shoreline. Almost everywhere the natural cover has been disturbed by long human occupance, and there must be indeed very few patches of what may be regarded as a virgin forest. With the exploitation of the manganese and iron deposits, which is of a recent date, the green mantle of the hills presents a scarred aspect with patches of reddish-brown landscape with the open pits and pans of the mining industry. It is possible that the lateritic plateaus, too, had once a more generous forest cover, but suffered destruction later. Oddly, but happily, some strands of forest cover are retained in the fringing borders of the plateaus in well settled areas like the Margao-Cortalim stretch. This is perhaps mainly due to the aesthetic regard the local community paid and still pays to trees. The vegetal growths in marshy lands and the sandy shores have undergone little floristic change; though it appears that they have shrunk in area due to extension of cultivation. And of course, the alluvial belts have been long ago brought under cultivation with extensions in the reclaimed marshy areas.

Vegetation types

The tropical wet evergreen forests occur in strands in the deeper valleys of the Ghats. This is a rich vegetation of evergreen type with a variety of species. These have an area of 250 square kilometres but are dispersed in patches. Tall trees, dense canopy, sparse middle layer, climbing creepers and dense humus matting are characteristic. The tropical moist deciduous forests occupy a large area of the

Sahyadrian Goa. These include important strands of teak which are estimated to occupy about 400 square kilometres of land. High tree species with close canopies are common. Many evergreen types occupy the lower layer and the undergrowth has bamboo and cane in many places. The pre-monsoonal leaf fall of the deciduous species is quite a striking feature in scenery. Laterite thorn forest is the third main type occuring in Goa. The hard, dry and shallow soils of the lateritic plateaus mainly the result of indiscriminate destruction of the earlier cover support only scrub of *acacia sundra* type with coarse grasses occupying the major areas ; in places these are laced with fringes of Karwand (*Carissa Carindas Lines*) *thickets*. It is in these areas that extensive regeneration of cashewnut has been planned.

The mangrove forests are extensive in the estuaries of the Mandovi and Zuari, particularly in the silted up fringes of the Cumbarjua canal ; they are also to be found in the minor estuaries north and south. Above the tidal limits, wherever the relief allows formation of beaches, typical beach flora tends to occur with shrubs and maritime grasses. The more common and extensive now is the planted species of Casuarina.

The Economic Landscape

The economic landscape is the face of the land and it is a present productive nature from the human point of view. The broad picture of land utilisation in Goa emerges from the following figures : of the total land of the district 28·4 per cent is under forests, 36·0 per cent is net area sown, 0·2 per cent under tree crops and groves, 0·4 per cent under permanent pastures and other grass, 5·5 per cent under non-agricultural uses is lands occupied by built up structures, roads, etc. and 4·3 per cent barren and uncultivable. A surprisingly large area 25·2 per cent is under cultivable waste which possibly reflects surface of the neglected extensive lateritic plateaus. The leading aspect of Goa's economic landscape is its agriculture which forms 60 per cent of the population's occupation. The most advanced agricultural areas are the lowlands of Salcete and their southern extension, the Tiswadi and the Mandovi alluvial stretches and their northern extension in the Mapusa flats. Elsewhere, good agriculture follows valleys that are increasingly flanked into the interior by moderate forest cover, cashew trees and scrub. The forest cover increases towards the edge of the Western Ghats. The pressure of population on land is heavy, and threatens to be all the more so with increasing urbanisation and immigration. The yields are still low, and the problem of land reform especially in connection with the traditional Comunidades is yet to be satisfactorily solved.

Mineral deposits

The chief economic minerals of Goa are associated with the Dharwarian complex and the basalts of the Sahyadrian range and their minor extensions in Goa ending with the low level lateritic plateaus. The major deposits are : iron, manganese, bauxite, high magnesia, limestone and clay. Though not yet fully prospected, there are substantial reserves of bauxite and aluminous laterite, especially in the southern parts of Goa. At present iron and manganese mining are the major extractive industries of Goa.

Regional Landscape

As already noted in the physical features, the mall area of the district presents interesting variations in the landscape ; and these are further accentuated by the impact of man's cultural elements in a manner that makes the regional landscape of Goa one of charm and antiquity that lends Goa a distinctiveness all of its own. The interplay between Man and Nature dates from the ancient times as can be seen from the many antiquities located in the district. They show a succession of cultural impacts under the Hindu, Muslim and Portuguese rules, the most remarkable being that of the Portuguese which lasted for nearly 460 years. From the geographical point of view, it is the intensity of the impact in a small territory that is significant. The fact that the present area of the district was conquered in two phases remained indelible in its landscape in the form of the 'Old' and the 'New' Conquests. The change in the landscape during the last twelve years of freedom has been rapid and significant, and it is possible to see the emerging patterns of new regions in Goa. On the basis of dominant features of the natural landscape, occupance and economic use of the land by population, population density and its socio-economic characteristics and the level of economic development we can recognise the following regions and sub-regions of Goa :—

(1) The Northern and Central Coastal lands of the Bardez, Tiswadi, Mormugao and Salcete :

(*a*) Beaches.—The Calangute beach and its extension ; the Colva beach and its extension.

(*b*) The alluvial valleys and estuarine belts of the Chapora, Mapusa, Mandovi and Zuari rivers, and their minor counterparts to the north and south viz. of Tiracol, Chapora, Caisua, Mapusa and Sal.

(*c*) The lateritic plateau extensions of the Mapusa-Porvorim-Aguada, the Dona Paula-Talasari and the Margao-Dabolim-Mormugao tracts.

(*d*) The urban modes of Mapusa, Panaji, Margao and Mormugao.

(2) The southern coastlands of Betul-Talpona stretch with intermediate lateritic bluffs and promontories including Cape Ramas.

(3) The region of the central lateritic plateaus and the intermediate valleys :

(*a*) Assonora, Cundaim, Ponda, Sanvordem, Quepem plateau lands and their minor extensions.

(*b*) The river stretches of upper Caisua and the middle portions of the Zuari, Mandovi and Kushavati valleys.

(4) The Sahyadrian Goa : the hilly and forested Sahyadries could be sub-distinguished into :

(*a*) The Sahyadrian scarp region and the region of its foothills.

(*b*) The river valleys which separate the main range from the foothills.

(1) The Coastlands

The coastlands from the northern border of the Tiracol river to the estuary of the Sal river in the south has a length of about 80 metres if we measure the distance straight across the wide estuaries of the Mandovi and Zuari. From the coastline proper, a belt of land varying in width between 12 to 15 kilometres, forms, due to economic development and administrative importance, the most developed part of the district. The local physico-economic variations are quite significant and they lend a scenic charm to the landscape.

(*a*) *Beaches*.—Close to the shore line are the succession of famous beaches interpersed with dark-brown and blackish lateritic bluffs Of the two longer beaches, the Vagator and the Calangute, the latter is more famous and it attracts tourists from the rest of the country and from overseas. Apart from the seasonal huts of the fishing community, the tourist hotels, and shacks, there is hardly any other construction. Fine long beaches backed by green aprons of coconut plantations, salt loving grasses and scrub, and lateritic bluffs separating the beaches and bays form a recurring theme in this landscape. The more important promontories, from north to south are the Tiracol, Chapora, Aguada, Cabo, Mormugao and Cape Ramas south of the Sal estuary; prominent on the landscape as their ruins and disused structures are, there are small settlements nestling under them. The Cabo, on the Mandovi estuary, the southern counterpart of the Aguada has historical associations as the residence of the Portuguese Governor, and continues to hold this importance as the residence of the Lt. Governor of the Union Territory of Goa, Daman and Diu. Dona Paula, at the southern edge of the Cabo, overlooking the Zuari estuary is a scenic point and offers ferry connections across the Zuari mouth mainly to the Mormugao harbour. The promontory

below which the Mormugao harbour has been developed is a fairly extensive table-land over which are situated the Goa Airport, and a little to the east of the airport is the new agrochemical complex. The southern rim of the table-land is a rocky cliff abutting the sea, with small stream re-entrants which support some agriculture and fishing activity. The northern base of the table-land has an apron of long alluvial belts that end with the shoreline proper; this belt supports good population. and of the settlements in this tract, Vasco-da-Gama is easily the leading one.

(*b*) *The alluvial valleys and coastal belts.*—The beach and cliff landscape changes to that of belts of fertile alluvium, through longiturdinal sandbars and rather abrupt lateritic slopes; these are areas of rich cultivation with rural settlements of agricultural and fishing population. A string of interesting villages like Querim (pop. 2346), Morgim (pop. 5,378), Calangute (pop. 7,600), Nerul (pop. 6,093) in the north and Benaulim (pop. 7,390) and Carmona (pop. 2,539) reflect the high economic status of this part of the rural community. This is partly due to good agricIture, but mainly due to the long established Goan tradition of migrants returning to their homes after retirement. This bond with the home is something unique to Goa, and it reflects in the well-built and well-maintained houses in quiet sylvan surroundings; this typical landscape of Bardez finds its extension in the smaller valleys, estuarine tracts, and alluvial flats of the rivers, repeats itself in the valley of the Sal river in Salcete.

(*c*) The lateritic landscape of the table-land has a sharp contrast. Mostly bare and covered with coarse grasses and scrub, it is fringed on the slopes with some natural forest cover and a good extent of cashew tree plantations. With the growth of population and recent economic development these stretches are attracting building activity along the roads that traverse them. In the north, the Betim-Porvorim extension and the spatial spread of Mapusa town are more important; in the centre, it is the Cabo-Altinho (Panaji) extension and in the south, the Mormugao plateau which has been already described.

In this region, modern residential buildings, colleges and other institutions, the airport and the new factories stand in contrast to the older elements of the plateau landscape of the churches and the Holy Cross at prominent elevations as marks of reverence and of the Latin past.

(*d*) Situated between the shoreline of curving bags and projecting headlands and the riverine tracts and the estuaries low levels, the towns of this region represent modes of economic and social activity.

Mapusa (pop. 20,001) situated at the base of a laterite plateau and steadily sprawling over the plateau slope and the top is a route

and commercial centre of north Goa. The older part of the town has a linear plan adhering close to the hill base; expansion has not only taken place along the base, but also through the low gap which carries the National Highway.

Panaji (pop. 59,258), the administrative headquarters of Goa Daman and Diu, is almost at the geographical centre of the semi-circle of the land that is Goa district. Though the earlier town clung to the table-land base, its extension was mainly on the slope and on the plateau top of the Altinho.

Margao (pop. 48,593) situated at the base of a lateritic table-land, is a natural centre of the middle region of the district. Physically the site marks the water parting between the southern stream of the Sal and the northern drainage.

Mormugao Port and Vasco-da-Gama (pop. 44065) are grouped under one municipal administration, possibly because both these towns have had a linear expansion along the railway line. The port has the natural protection from the monsoonal winds of the table-land behind it; the sea-wall extended recently gives better berthing facilities; the estuary gives a generous anchorage to vessels in stream. This facilitates the export of minerals which forms the main activity at the port.

Vasco-da-Gama is the residential and commercial appendage of the port. A linear and once a well-planned and well-maintained township, Vasco-da-Gama is now an overcrowded and dusty settlement consisting partly of hutments of industrial and commercial labour, on the fringe. Banks, commercial houses and hotels and restaurants cluster near the town core. The railway station and its environs constitute the town centre.

(2) The Southern Coastlands

The main difference between these and the northern coastlands is not physical but economic. In appearance this part of coastal Goa has similar aspects of bays, sand dunes, and estuaries, though a more forbidding lateritic landscape ending in Cape Ramas prevails in the centre. Of the several streams draining this part, the more important are the Talpona and Galgibaga rivers, but these as well as minor stream valleys have better cultivation and they attract rural settlements to their sides. The villages are small and eminently argricultural with fishing as a small activity in the shoreside settlements. Though Chauri (pop. 1,335) is an administrative centre and therefore, possibly classed as a town, other villages are also large, and the Highway passing from the north to the southern border and to Karwar beyond, holds some economic attractions.

(3) The Central Lateritic Plateaus and the Intermediate Valleys

This middle part of Goa very much curves round the coastal lands, but stands significantly high as a back-drop of a landscape that is mainly flat and open, with scrub slopes and red scars of mining; only a few slops still preserve the green vegetal cover.

The more prominent are the plateau lands of Assonora, Cundaim, Ponda, Sanvordem and Quepem. Manganese and iron mining though economically important is denuding this part of Goa not only of its mineral resources, but the natural cover of forests, and with it the scenic charm.

The river stretches of the upper Caisua as well as those of the middle Zuari, Mandovi and Kushavati rivers provide belts of good agricultural land along their valley sides. Assonora (pop. 2,167), a route centre in the north is more concerned now with local mining activities. Bicholim (pop. 8,550) still breathes its antiquity through the nearby fort and the rather stagnant handicraft of making brass candle holders. Ponda (pop. 7,658) is a natural route centre through which the road from the Anmod Ghat passes and bifurcates to reach Panaji and Mapusa in the north, to Margao and Mormugao in the west and south-west, and to Sanvordem in the south-east; its nodality has now promoted industrial growth in and around this small town. Quepem (pop. 2,925) has a similar situation as a route centre. All these towns have similar sites in the local river valleys of points having an access across the plateau heights through low saddles; retail commerce is their main economic function; they are also administrative centres. South of Quepem the plateau topography has a higher general elevation and a harsher landscape. This landscape continues right upto the border of the district in the south. This is a thinly populated part of the middle Goa.

This part of Goa offers not only physical contract to coastal Goa but also a cultural one. While the coastlands carry a latinised landscape this is a region of the Hindu landscape which expresses itself in many of the temple shrines and the village settlements wrapping round them. Almost every house nucleus is concerned with a deity which attracts its devotees from far and wide in the rest of India. Shri Mangeshi and Shantadurga are the two leading shrines. The devotees of all these shrines contribute in an important manner to the economic sustenance of this region.

(4) The Sahyadrian Goa

The transition from the middle plateau parts of Goa to the hilly regions of the east is abrupt, especially to the east of the middle reaches of the Mandovi and Zuari rivers.

(*a*) The Sahyadris in Goa be distinguished into three main parts; the north-eastern Morlemgod-Vagheri complex; the Sahyadrian scarp

of the eastern Goa border; and the southern complex of extensions between Goa and Dharwar-Karwar districts of Karnataka having a varied topography and a rich forest cover in the high regions. The region on the whole is thinly populated. In the north and the centre the basaltic main scarp dominates the scenery; the scarp buttresses in the form of hill ranges separated by the main river valleys and their tributaries sprawl below the main scarp. Most of this part of the district is a forested area, though the vegetal cover has been affected by 'Kumeri' cultivation in the past; and now by mining which has created extensive bare areas here and there.

(*b*) River valleys form belts of human settlement along good rice fields on the valley flats and the coconut-areca garden lands. Along the Sanguem stream are small nodal settlements situated at the base of the Sahyadris foothills. They control the ghat routes. Of these routes the one to Anmod leading further to Londa and beyond, is the most important for passenger and goods traffic. It forges the economic links with the rich agricultural regions of this part of Karnataka. The other routes to the north and south are of local importance and are used mainly by carts and pedestrain traffic.

The rail link from Londa to Mormugao is, as we have seen, old and traditional. There is now an increased passenger and goods traffic, and the Dudhsagar falls continue to draw large number of visitors to its scenic charm, though the more mundane future expression is the possible development of hydro-electricity.

Regional Interdependence of Goa

Even in the days of the Portuguese rule, the economic and cultural relations of Goa were intimate enough with the bordering regions of the rest of India, though the tie with Bombay was much stronger because of the employment opportunities and educational facilities in Bombay. Goans used to import foodgrains and meat: to these were added the money spent by devotees and tourists. Articles of European origin generally luxury goods like watches and scents, found a wide market over the rest of India, often illicitly. With the district becoming a part of the Indian Union, the spatial economy of Goa has changed to a large extent. The inter-State trade and movement of people have increased; there are more imports of foodgrains, vegetable and meat; immigrants from southern India are attracted to Goa in search of employment, especially in buildings and road construction. There is a great flow of finance and managerial activity to Goa in support of its planned economic development. The linking of electric supply with the Karnataka and Maharashtra grids is one such spatial expression of economic activity, and the West Coast Highway and the Anmod Ghat route as well as the Londa-Mormugao

Rail Link are the important expression on land. The Mormugao Port and the Panaji passenger jetty are the expressions of the maritime links and the Dabolim Airport that of the increasing important air borne traffic. Economic and social ties with Bombay are the strongest ; next to it they are with Belgaum and Kolhapur ; and then with the neighbouring areas of Dharwar and North Kanara districts. Mormugao Port serves as one of the important nodes in the foreign trade of the country.

GEOLOGY

By far the greater part of Goa consists of Pre-cambrian rocks namely quartz-sericite-schist, metavolcanics, quartz-chlorite-schist, quartz-chlorite-biotite schist, meta-graywacks, conglomerate (tilloid), pink phyllite with lenticular bodies of banded manganiferous and ferruginous quartzites and upper meta-graywacke intruded by ultra-basic sills and dykes, porphyritic granite and gneissic granite, dolerite dykes and vein quartz. A small portion of the area to the north is occupied by the Deccan trap. The rocks have undergone lateritisation to varying degrees especially along the coast where the laterite profile extends to a depth of 50-75 m. from the surface.

The stratigraphic succession of the rocks in Goa is given below :

Recent ...	Alluvium and Soil.
Recent to Sub-Recent ...	Laterite.
Upper Crateceous to Lower Eocone.	Deccan Trap.
P R E C A M B R I A N ...	Younger dolerite dykes.
	Pink Porphyritic granite with associated pegmatite and vein quartz.
	Gneissic granite with associated pegmatite and vein quartz.
	Ultra-basic and basic intrusives.
	Upper meta-graywacke.
	Pink ferruginous phyllite with limestone, manganiferous chert-breccia and banded ferruginous quartzite (with iron and manganese ores).
	Quartz chlorite-biottite schist, quartz-chlorite schist with thin beds of quartzite, slate and meta-graywacke with conglomerate (tilloid).
	Meta-basalt with associated acid flows and tufts and thin beds of quartzite and quartz-sericite schist.

Meta-volcanics with thin beds of quartzite and quartz-sericite schist

The meta-volcanics consist essentially of schistose and massive meta-basalts with the associated tufts, agglomerate and partly of quartz-porphyry. The schistose meta-basalt is extensively present between Polem and Talpona, on the northern and southern slopes of Barcem hill and between Betul and Adnem. Amygdular variety is present in the Mormugao headland, west of Xeldem and south of Gocoldem and around Arvalem.

The massive variety of meta basalt occurs on the conspicuously high ridges of Morpirla-Molorem, Barcem-Vaul, Gocoldem-Mangal, Gaodongrem-Cusquem, Banda-Usgao and Candepar and in the ghat section from Salguinim to Kumari peak.

The acid flows are represented by quartz-porphyry which is present as narrow strips near Vaul, Xeldem and Padi.

The quartzites and quartz-sericite schist occur as narrow beds within the meta-basalts. Good outcrops of quartzite are present near Caranzol, Codar, Tambdi and on Asvelicho Dongar and Deulmola hill. The quartz-sericite schist is present near Codal, on the Olon hill, east of Molem and as narrow caught up patches in the Quepem gneissic granite on the Cuncolim hill, south of Sanvordem, between Deulmola and Sanvorcotem and near Rowle.

Quartz-chlorite-biotite schist, quartz-chlorite schist with thin beds of quartzite, slate, meta-graywacke and conglomerate (Tilloid).

Associated with the meta-volcanics and overlying them are present a set of rocks ranging widely in composition, texture, colour and thickness. The unit is represented at places by just one single rock type or a combination of two or more of them. This point is well illustrated by the fact that the entire Kalay hill Δ 334·36 m. and Tolsoi hill Δ 416 m. are completely made up of conglomerate, the Bati hill Δ 437·46 m. and the area between Ribandar and Cumbarjua canal by graywacke, the Boma hill Δ 678·17 m. and the area between Moissal and Cundaim by quartz chlorite schist and the area between Durbhat to Agonda and Querim by quartz-chlorite biotite schist while the area around Cavorem, the area between Marangara and Mangueshi and that between Borbatta and Vasco-da-Gama are made up of graywacke, conglomerate and quartz-chlorite schist.

The quartz-chlorite-biotite schist is grey in colour, fine grained thinly laminated, flaggy soft and feebly foliated.

The quartz-chlorite schist is light to dark green in colour, fine grained highly schistose and soft. Between Moissal and Conshem a number of thin beds of cream coloured quartzite are seen to be included in the rock.

The meta-greywacke is hard, massive and compact and feebly foliated. It has micro-breccia texture and consists of sub-angular to angular fragments of quartz, felspar and rock pieces set in a fine grained matric consisting of chlorite and quartz.

The conglomerate (tilloid) occurs in the form of lensoid bodies, generally in association with graywacke. The dimension of the conglomerate bodies vary widely so that their length varies from about 50 m. to several kilometres and the width from about 10 m. to a couple of kilometres. Spectacular occurrences of the conglomerate are present on the Kalay hill Δ 334·36 m., Tolsoi hill Δ 0·416 m., Maina hill Δ 469·19 m. and Bombad hill Δ 369·19 m. An extensive conglomerate body is present between Marangara and Mangueshi over a strike length of over 15 kilometres with an average width of about 0·5 kilometres.

The rock consists of sub-rounded to rounded cobbles, pebbles and boulders of a variety of quartzites and gneissic granite cemented in a graywacke matrix. Generally the ratio between the matric and pebble is 9 : 1 and occassionaly locally it is even 1 : 1.

Pink ferruginous phyllite with limestone, manganiferous chert-breccia and banded ferruginous quartzite (with iron and manganese ores)

The pink ferruginous phyllite horizon has a wide distribution. It extends from one end of Goa to another from the river Talpona in the northwest to Salguinim in the southeast over a length of about 95 kilometres. This entire length of the phyllite constitutes the western limb of the synclinal fold. The eastern limb of the fold is preserved only scantily from Sancordem in the south to Ivrem Curdo in the north owing to granite intrusion and shearing. In the central and south central parts of Goa, the pink phyllite occurs over an extensive area from Viliena on the East to Rivona on the west. Narrow strips are present near Betul and around Siroda.

Magnesium rich crystalline limestone intercalated with chert bands occur in the north-eastern part of Goa and are well exposed between Vainguinim on the east and Ivrem Curdo on the west. The thickness of the limestone varies from 15 m. to 40 m. In addition to this occurrence, limestone was met with at depth below manganiferous laterite in the area west of Sirigal in the Salauli dam site area. There is, however, no outcrop of the limestone anywhere in the vicinity.

Within the pink phyllite there are thin beds of manganiferous chert breccia and banded ferruginous quartzites. The manganiferous chert breccia are present in the south Goa, south of Sanvordem. Generally they are converted into laterite at the surface but are exposed in the innumerable manganese ore pits and quarries. The banded haematite quartzite is well exposed in the Arvalem falls, in the Moitem

nala, north of Assonora, in the (Bicholim) Mines of M/s. Dempo & Co. in the Madai river, south of Birondem, and north of Codal. The banded magnetite quartzite is fairly extensively present around Viliena and Barazam.

Upper Meta-Graywacke

The upper meta-graywacke overlies the pink phyllite conformably and occurs over an extensive area between Vainguinim, Gonteli, Birondem in the north-east and between Dodomarg, Mopa and beyond in northern Goa. The rock is medium to fine grained, schistose and dark grey in colour.

Ultrabasic and Basic Intrusives

The various schistose rocks are intruded by the ultrabasic rocks represented by talc-chlorite schist, peridotites and amphibolites and basic rocks represented by gabbro.

Talc-chlorite schist occurs near Xeldem in the gneissc granites. Another exposure is near Boma hill Δ 678·17 m. in the quartz-chlorite schist.

Talc-chlorite schist also occurs in the road cuttings of Pernem-Parastem-Corgaon road, around Malpem and Maina.

Peridotite occurs as long lenticular patches within the basic rocks on the Usgao hill Δ 372·60 m. and Bandol hill Δ 460·09 m.

Gneissic Granite

The gneissic granite occupies an ellipsoidal area extending from Sanguem in the east to Chandranath hill and Dramapur in the west. The maximum width in the N-S direction is 9 kilometres between Chandranath and Sanvorcotem.

The rock is generally hard, massive, compact, fine to medium grained and feebly foliated. It shows as intrusive relationship with the surrounding schistose rocks.

Porphyritic Granite

In the south Goa between Butpal on the east to the sea coast on the west, a linear granitic body occurs in a general E-W direction. The rock exhibits porphyritic texture and is generally pink and at places grey in colour. The rock shows intrusive relationship with the surrounding schistose rocks and it is also likely to be younger than the Quepem gneissic granite.

Younger Dolerite Dykes

The schistose rocks and the granite rocks are intruded by a number of dolerite dykes all over the area. The rock is generally massive and dark green to greenish black in colour.

Deccan Trap

A narrow strip of Deccan trap extends all along the Goa border from north east of Vainguinim upto the Boa-Karnataka-Maharashtra

border north-east of Choraundem. It occurs at altitudes varying from 600 m. to 700 m. The rocks are hard, compact and massive varying in colour from greenish black to brownish black. They are fine to medium grained with ophitic texture.

Laterite

A mantle of laterite varying in thickness upto 15 m. occurs extensively over almost all the rock types. Pink phyllite, graywacke and quartz-chlorite schist are generally less lateritised. The meta-basalts show partial lateritisation. The quartzite, quartz-sericiteschist, tilloid and gneissic granites do not show any lateritisation. The narrow strip of Deccan trap has a thin cover of laterite. The thickness of laterite mantle extends upto 15 m. depending upon the vicinity to sea coast, the nature, chemical composition of the original rock and the topography.

Economic Geology

The chief minerals of economic importance are iron ore, manganese ore and bauxite. In addition, there are small deposits of clay and high magnesia limestone.

The iron and manganese ore deposits are confined to the pink phyllite horizon. It occurs over a length of 95 kilometres from one end of Goa to another, that is, from the river Talpona in the north-west to Salguinim in the south-east.

The area south of Sanvordem consists chiefly of manganese ore deposits. The area to the north of Usgao consists almost entirely of iron ore deposits, the central portion between Usgao and Sanvordem consists essentially of iron ore deposits and some manganese ore deposits. Thus, from north to south there is a clear decrease in iron ore concentration and an increase in the manganese ore concentration.

Iron ore: Iron ore deposits consisting essentially of hematite and partly of magnetite, limenite and goethite occur as blankets and lensoid bodies of varying dimensions at and near the surface. Generally, they occupy the crests and slopes of hills. Higher the hill and steeper the slope, better is the grade of the ore. At the apical portion of the hill the ore concentration is maximum while along the slopes on either side it is moderate and in the valley portions negligible.

On the surface the deposits consist of hard lumpy ore followed at depth by friable and powdery ore. The presence of workable quantity of powdery ore at depth, is directly related to the quantity of the lumpy ore and the percentage of recovery of ore in the lumpy ore zone.

The iron ores of Goa are classified as massive ore, beeded ore, platy ore, brecciated ore, mixed ore, earthy ore, laminated ore (biscuity ore), concretionary ore and powdery ore. The average Fe.

content is about 59 per cent and the average SiO_2 is 3 per cent, Al_2O_3 is 6 per cent and Mn is 0·26 per cent and combined H_2O is 5·76 per cent. The TiO_2, S and P contents are low averaging about 0·023per cent and 0·024 per cent, respectively. The powdery ores are deep blue and have an average Fe content of 63 per cent, SiO_2 3-4 per cent and Mn 0·26 per cent and combined H_2 3·77 per cent.

Distribution of deposits : Iron ore deposits lie in a general NW-SE direction from one end of Goa to another over a length of 95 kilometres from Naibag in the N.W. on the Goa-Maharashtra border to Salguinim in the S.E. near the Goa-Karnataka border. There are also isolated small deposits along the sea coast near Betul and Galgibaga.

A total reserve of 600 to 800 million tons of iron ore has been estimated in Goa. About a third of this is likely to be powdery ore of 60 per cent iron and above and, the rest, lumpy ore with a metal content between 55 and 60 per cent.

Manganese Ore : The manganese ore deposits of Goa are also of the lateritoid type and are found at or near the surface. They occur as irregular lensoid bodies and pockets of varying dimensions at the crests and flanks of hills, on the small lumps and knolls and on the slopes of hills. The deposits generally do not occur on the top of a plateau or a gently sloping terrain. The moulds and knolls where the ore is present are often seen to be minor anticlinal folds and domes. The ore deposits are covered by laterite with concretions of black iron and manganese ore followed at depth by bouldery manganese ore and then manganiferovs clay or wad. The thickness of these different horizons and the percentage of recovery of manganese ore in them varies from deposit to deposit.

The manganese ore consists essentially of pyrolusite and psilomelane and partly of cryptomelane, braunite and manganite. Almost all the manganese ores of Goa contain some proportion of iron in them and the iron content in the ore is often in inverse proportion to the manganese content. Consequently, the proportion of iron content which is a deterrent to the quality of manganese ore decides the grade of ore.

Distribution of deposits.—The best manganese deposits of Goa are situated to the south of Nissanval Δ 363·00m. A few small deposits are also found in the central part and in the northern parts of Goa.

Clay.—There are a few clay pockets near Ponda, Quepem and Bardez talukas. Of these the Kamarkhand deposit in Ponda taluka. Cacora deposit in Quepem taluka and the Colvale deposit in Bardez taluka are of some interest. The clays in the above localities vary from pale cream to buff and grey and are suitable for use as refractory materials.

The total amount of washed clay obtainable from the three deposits is 1·265 lakhs tonnes, out of which 0·15 lakh tonne can be obtained from Kamarkhand deposits, 1·1 lakh tonnes from Cacora deposit and 0·015 lakh tonnes from Colvale deposits.

Limestone.—Magnesium rich crystalline limestone intercalated with thin chert bands extends from north of Vainguinim to Ivrem Curdo in the north-eastern part of Goa and has a length of over 20 kilometres. The thickness of the limestone bed varies from 15·40 m. and it has generally very gentle dips towards the north. The rock is fine grained, massive, hard and compact and varies in colour from light grey to pale blue.

The limestone is not suitable for use in blast furnace or cement manufacture.

Bauxite.—In the course of search for bauxite the Geological Survey of India has located a few prospects distributed over 130 kilometres along the west coast. The prospects are Polem-Loliem-Galgibaga, Mobolim-Consera, Cavelossim-Verna-Raia, Betim-Porvorim, Δ 98·05 m. area, Mopa, Calangute, Taegao-Bambolim, Pernem, Morgim and Camurlim. Their potentiality is being assessed.

Workable quantities of bauxite have been recently reported to exist near Betul.

CLIMATE*

Introduction

The territory, which is situated well within the tropics and flanked by the Arabian Sea to the west and the Western Ghats (Sahyadri) rising to an average height of 1 kilometre to the east, has tropical-maritime and monsoon type of climate, with profound orographic influence. Accordingly, the climate is equable and moist throughout the year. Other features of the climate are the regular and sufficient rainfall during the southwest monsoon season, mainly from June to September and temperate weather during the rest of the year with little or no clear cut demarcation between what is generally termed as the winter period (Jan-Feb) and the hot weather period (Mar-May). The climate is generally pleasant. Discomfort may be felt in the absence of wind particularly during pre-monsoon and post-monsoon months.

Rainfall

Records of rainfall in respect of 12 stations, including the two Meteorological observatories at Panaji and Mormugao for the available years from 1931 to 1960 are given in Table 1. Table 2 denotes the frequencies of occurrence of annual rainfall of Panaji within specified

*The section on Climate has been contributed by the Department of Observations (Climatology and Geophysics), Pune.

ranges during the period 1901-60. These frequencies may be taken as representative for the territory as a whole.

The monsoon bursts over the territory in the beginning of June and withdraws from it by early October. The annual rainfall is of the order of 350 cm. As a result of the orographic influence, rainfall increases rapidly towards the western ghats from 250-300 cm. along the coast to over 400 cm. nearer the ghats. Over 90 per cent of the annual rainfall occurs during the monsoon months of June to September. July is the rainiest month when about 36 per cent of the annual rainfall is recorded. As can be judged from the available records, the heaviest fall in 24 hours recorded in the Territory was 563·0 mm. at Colem on 11th August, 1934. Variations in rainfall from year to year are not large, variability of rainfall being 14 to 20 per cent only. During the period 1901-1960, annual rainfall at Panaji was between 40 to 60 per cent of the mean in 2 years, between 60 to 80 per cent in 8 years, between 120 to 140 per cent in 11 years and between 80 to 120 per cent for 39 years. These may be considered as representative values.

This territory gets rainfall of 10 mm. or more on 70 to 100 days in a year on an average, the number of rainy days (i.e. days with rainfall 2·5 mm. or more) being 100 to 125. As in the case of rainfall, the average number of rainy days is more in the eastern portion of the territory, nearer the ghats, than near the coast.

Occasionally, rainfall over the territory becomes heavy and vigorous in association with cyclonic disturbances which form in the Arabian Sea or those which form in the Bay of Bengal and emerge into the Arabian Sea, after crossing the Peninsula. During the 70 year period (1891-1960) the territory was affected by 8 such disturbances.

Temperature

Meteorological data from two observatories at Panaji for 1964-69 and at Mormugao for 1931-60, are available. Due to the maritime influence the diurnal range of temperature during the day is not large. The diurnal range is the least, being 4-6°C, during the monsoon season and increased to the maximum of 10-12°C, during December to February.

Temperature variations through the seasons are also slight. May is relatively the warmest month when the mean daily temperature is around 30°C and January the coolest with the mean daily temperature at a slightly lower value of about 25°C.

It is interesting to note that the day temperatures are lowest in the monsoon months of July and August and not in the 'cool weather' months of December and January. Maximum temperatures are at their highest (around 33°C in the mean) in the premonsoon months of

April and May and again in the postmonsoon months of November and December. On the other hand lowest night temperatures of the order of 20°C are experienced in December and January. During the winter season, cold and dry continental air from the north is prevented by the western ghats from exerting its full influence over the territory with the result that temperatures do not fall appreciably in the same way as they do inland to the east of the ghats or even along the coast in the north. Along the coast, the maximum temperature rarely goes beyond 37°C. The highest maximum temperature recorded at Panaji since 1964 was 36·5°C on February 16, 1965 and the lowest minimum of Mormugao 15·1°C on January 4, 1966. The higest maximum temperature recorded at Mormugao during the 30 year period (1931-60) was 37·2°C on February 21, 1943 and March 18, 1948 and the lowest minimum of 12·2°C on November 18, 1946.

Humidity

Due to proximity of the sea, the territory is generally humid, with a further rise in humidity during the monsoon weather. Even during the summer months the relative humidity is generally above 60 per cent.

Cloudiness

Skies are clear to lightly clouded from November to March, with gradual increases thereafter till May after which there is a sharp increase in cloudiness with the onset and advance of monsoon; skies remain mostly clouded to overcast till September. Cloudiness decreases sharply after October.

Winds

Winds in the morning are easterly to north-easterly during October to April backing to north or north-east in May, while in the afternoon they tend towards west or north-west, due to the sea breeze effect. During the monsoon months the winds are generally westerly throughout the day.

Winds are fairly strong during the monsoon period. Otherwise they are generally moderate in strength.

Special Weather Phenomena

During the monsoon, the coast experiences strong winds accompanied with heavy falls. Thunderstorms are quite common during the post-monsoon period and also in the latter part of the hot season.

Tables 3, 4 and 5 give the temperature, humidity, mean wind speed together with predominant wind direction and the frequency of special weather phenomena at Panaji and Mormugao and table 6 gives the monthly total cloud amount and mean number of days with clear or lightly clouded skies and with mostly clouded to overcast skies at 0830 and 1730 hours. IST for Mormugao which can be taken as representative of the conditions over the coastal belt.

TABLE No. 1—NORMALS AND

Station		January	February	March
Pernem	a	1.0	0.3	0.8
	b	0.2	0.1	0.1
	c	....	....	....
Mapusa	a	1.2	0.2	0.2
	b	0.2	0.1	....
	c	0.1	....	....
Bicholim	a	1.0	0.2	0.1
	b	0.3	....	0.2
	c	....	....	....
Ponda	a	1.2	0.1	0.3
	b	0.2	0.1	0.1
	c	....	....	....
Valpoi . ..	a	1.4	0.1	0.9
	b	0.3	....	0.1
	c	0.1	....	....
Colem	a	1.4	0.3	1.7
	b	0.2	0.1	0.3
	c	....	..	0.1
Margao	a	1.3	0.4	0.1
	b	0.2	...	0.1
	c	....	..	...
Quepem	a	0.2	0.3	....
Sanguem	a	0.6	...	1.6
	b	0.2	...	0.2
	c	....	...	..
Canacona	a	0.6	....	0.4
	b	0.2	....	..
	c	....	.	....
Tiswadi (Panaji)	a	1.7	0.1	0.7
	b	0.3	0.1	0.2
	c	0.1	....	...
Mormugao	a	1.8	....	0.4
Mean	a	1.1	0.2	0.6
	b	0.2	0.1	0.1
	c	....	....	....

(a) Normal rainfall in mm.

EXTREMES OF RAINFALL

April	May	June	July	August	September
13.6 1.2 0.2	69.5 5.2 2.1	923.8 25.8 18.6	1,220.8 29.8 22.6	623.3 28.0 15.3	277.7 19.2 8.2
15.8 1.5 0.5	89.8 5.6 2.4	870.0 26.3 17.9	1,009.3 30.2 21.0	538.9 28.1 14.8	276.0 20.1 7.3
10.0 1.0 0.2	64.4 5.3 1.7	937.5 25.3 18.7	1,264.9 29.9 23.9	659.6 28.8 16.9	312.1 21.0 9.3
21.0 1.1 0.4	91.0 5.2 2.5	1,072.6 25.0 19.4	1,358.0 30.3 24.9	691.2 27.2 18.1	323.3 19.4 9.7
13.7 1.9 0.4	92.3 6.2 2.6	955.5 25.5 19.7	1,486.3 30.6 26.8	849.0 29.2 20.7	378.4 22.9 12.1
19.8 2.7 0.5	111.5 7.7 2.7	1,075.2 26.3 19.7	1,800.1 30.9 28.2	1,091.7 29.7 23.1	516.7 25.1 14.8
16.4 1.0 0.4	86.8 5.1 2.3	913.1 24.5 18.4	1,054.4 30.0 21.9	505.8 26.4 14.1	257.2 17.3 8.0
12.2	93.1	960.9	1,378.2	712.7	320.2
11.5 1.6 0.5	78.9 6.4 2.6	1,010.5 24.9 18.8	1,537.2 30.8 26.7	774.7 29.1 19.9	391.6 21.2 10.9
16.2 0.9 0.5	96.2 4.7 2.3	902.0 25.1 18.7	1,025.0 29.7 22.6	537.4 26.3 15.3	293.2 17.8 8.7
18.4 1.8 0.5	86.6 6.3 2.5	869.4 25.6 17.2	923.4 29.6 20.0	456.2 26.8 13.0	252.7 19.1 8.3
20.3	81.3	777.8	905.1	[412.9	225.9
15.7 1.5 0.4	86.2 5.8 2.4	940.7 25.4 18.7	1,246.9 30.2 23.9	654.3 28.0 17.1	318.7 20.3 9.7

(b) Number of days with rainfall of 0·1 mm or more.

TABLE

Station		October	November	December
Pernem	a	146.4	34.0	2.9
	b	9.7	2.9	0.6
	c	3.9	1.2	0.1
Mapusa	a	127.5	33.8	2.6
	b	10.4	3.3	0.3
	c	3.6	1.0	0.1
Bicholim	a	196.7	50.0	3.6
	b	12.8	4.2	0.4
	c	5.6	1.4	0.1
Ponda	a	177.4	46.4	2.7
	b	10.2	3.4	0.2
	c	4.9	1.6	0.1
Valpoi	a	216.6	51.2	4.1
	b	14.7	4.4	0.3
	c	6.8	1.6	0.2
Colem	a	266.3	60.8	5.3
	b	15.7	5.2	0.6
	c	7.4	2.1	0.2
Margao	a	117.8	40.1	3.9
	b	9.2	3.3	0.3
	c	3.7	1.3	0.2
Quepem	a	165.0	56.4	0.3
Sanguem	a	215.0	64.5	3.9
	b	12.9	4.5	0.3
	c	6.4	2.2	0.1
Canacona	a	130.1	41.2	7.2
	b	8.7	3.1	0.5
	c	3.8	1.4	0.2
Tiswadi (Panaji) ..	a	118.9	35.8	3.0
	b	9.7	3.3	0.4
	c	4.3	1.3	0.1
Mormugao	a	138.7	42.6	4.9
Mean	a	168.0	46.4	3.7
	b	11.4	3.8	0.4
	c	5.0	1.5	0.1

(c) Number of days with rainfall of 10 mm. or more.

No. 1—contd.

Annual	*Highest annual rainfall as % of normal and year**	*Lowest annual rainfall as % of normal and year**	+Heaviest rainfall in 24 hours*	
			Amount (mm)	Date
3,314.1	125 (1951)	54 (1951)	337.0	26th July 1931.
122.9				
72.2				
2,965.3	128 (1931)	57 (1941)	246.8	24th July 1931.
126.1				
68.7				
3,520.1				
129.2				
77.8				
3,785.2				
122.4				
81.6				
4,049.5	123 (1931)	68 (1935)	279.0	2nd July 1938.
136.1				
91.0				
4,950.8	124 (1931)	76 (1935)	563.0	11th August 1934.
144.5				
98.8				
2,997.3				
117.4				
17.3				
3,699.5				
5,090.0	126 (1950)	62 (1941)	267.5	30th June 1956.
132.1				
88.1				
3,049.5				
117.0				
73.5				
2,766.9	131 (1942)	55 (1905)	293.4	4th June 1954.
123.2				
67.0				
2,611.7	134 (1955)	71 (1935)	307.1	21st May 1933.
3,483.3				
127.2				
78.8				

* Based on all available data upto 1960.

** Years given in brackets.

TABLE No. 1—concld.

Annual values of	Pernem	are considered for	1931—1960
"	Mapusa	"	1931—1960
"	Valpoi	"	1931—1940
"	Colem	"	1931—1940
"	Sanguem	"	1936—1960
"	Tiswadi (Panaji)	"	1901—1960
"	Mormugao	"	1931—1960

+ For heaviest rainfall in 24 hours, the period considered is as indicated below —

Pernem	1928—1960
Mapusa	1928—1960
Valpoi	1928—1940
Colem	1928—1940
Sangvem	1936—1960
Tiswadi (Panaji)	1901—1960
Mormugao	1931—1960

TABLE No. 2—Frequency of Annual Rainfall In The District (1901-1960).

(Panaji)

Range in mm	No of years	Range in mm	No. of years
1500—1700	2	2701—2900 ..	9
1701—1900	1	2901—3100 ..	4
1901—2100	6	3101—3300 ..	2
2101—2300	6	3300—3500 ..	8
2301—2500	11	3501—3700 ..	2
2501—2700 ..	9		

TABLE No. 3.—NORMALS OF TEMPERATURE AND RELATIVE HUMIDITY

(*Mormugao*).

Month	Mean Daily Maximum Temperature °C	Mean Daily Minimum Temperature °C	Highest Maximum ever recorded °C	Highest Maximum ever recorded Date	Lowest Minimum ever recorded °C	Lowest Minimum ever recorded Date	Relative Humidity 0830 %	Relative Humidity 1730* %
January ..	29.7	21.4	34.4	1946 Jan. 21	16.7	1945 Jan. 7	66	62
February ..	29.0	21.9	37.2	1943 Feb. 21	17.2	1944 Feb. 10	72	66
March ..	30 0	23.9	37.2	1948 Mar. 18	19.4	1935 Mar. 4	73	69
April .	30.9	26.1	33 9	1947 Apr. 14	20.6	1953 Apr. 5	72	69
May ..	31.3	26.9	33.3	1938 May 26	21.7	1955 May 18	73	72
June ..	29.4	24.7	33.3	1948 Jun. 7	17.0	1964 Jun. 10	83	83
July .	28 0	24.0	31.7	1931 Jul. 26	20.2	1965 Jul. 21	86	88
August	27.8	23.9	32.4	1965 Aug. 14	19 3	1964 Aug. 7	87	86
September .	28.1	23.8	31.7	1951 Sep. 26	21.1	1946 Sep. 19	87	84
October .	29.8	23 9	36.1	1936 Oct. 26	18.3	1932 Oct. 30	82	78
November ..	31 0	22.8	35.6	1965 Nov. 11	12 2	1946 Nov. 18	69	65
December ..	30.5	21.5	35.6	1965 Dec. 1	17 2	1955 Dec. 1	62	60
Annual .	29.5	23.7					76	73

(*Panaji*)

Month	Mean Daily Maximum Temperature °C	Mean Daily Minimum Temperature °C	Highest Maximum ever recorded °C	Highest Maximum ever recorded Date	Lowest Minimum ever recorded °C	Lowest Minimum ever recorded Date	Relative Humidity 0830 %	Relative Humidity 1730* %
January ..	31 5	19.4	35 2	1965 Jan. 16	15 1	1966 Jan. 4	80	53
February ..	31 8	20.0	36 5	1965 Feb. 16	16.7	1965 Feb. 7	80	56
March ..	31 8	23.1	35.0	1964 Mar 12	19.7	1965 Mar 21	80	61
April	32.8	25.2	34.7	1967 Apr. 5	21.5	1964 Apr. 3	73	64
May ..	32 8	26.8	35.3	1967 May 3	22.1	1967 May 16	73	73
June .	30.5	24.5	34 2	1969 Jun. 1	21.7	1964 Jun. 16	86	79
July ..	28.9	23.9	31.7	1966 Jul. 9	21.6	1964 Jul. 12	89	85
August ..	29.1	24.0	34.0	1965 Aug. 14	21.8	1964 Aug. 2, 3, 4	87	82
September .	29.4	23.6	32.6	1966 Sep. 27	21.0	1964 Sep. 27	89	79
October .	31.1	23.4	34.7	1969 Oct. 6	20.7	1964 Oct. 9, 12,	85	71
November ..	32.8	22.3	35.9	1969 Nov. 11	15.3	1964 Nov. 29	76	60
December ..	32.7	21.0	35.6	1965 Dec 1	16.0	1964 Dec. 30	76	57
Annual ..	31.2	23.1					81	68

* Hours I. S.T.

TABLE No. 4.—MEAN WIND SPEED IN Km./Hr. AND PRE-DOMINANT WIND DIRECTION.

		Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Annual
(Panaji)														
Wind Speed		9·7	10·1	11·0	11·4	13·2	13·5	19·0	17·1	10·1	8·2	8·8	9·5	11·8
Wind Direction	I	ENE	ENE	ENE	ENE	NNW	WSW	WSW	WSW	Var	ENE	E	E	
	II	WNW	WNW	WNW	WNW	WNW	WSW	WSW	WNW	WNW	WNW	WNW	WNW	
(Mormugao)														
Wind Speed		10·6	11·6	12·5	13·4	14·6	19·0	23·1	18·8	11·2	9.6	9·5	9·7	13·6
Wind Direction	I	ENE	ENE	ENE	ENE	NNW	Var	WSW	WSW	Var	ENE	ENE	ENE	
	II	WNW	WNW	WNW	WNW	WNW	WSW	WSW	WSW	WNW	WNW	W	WNW	

I—0830 hrs. IST II—1730 hrs. IST

TABLE No. 5.—SPECIAL WEATHER PHENOMENA

*Mean Number of days with	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
(Mormugao)													
Thunder ..	0·2	0	0·4	3	4	4	0·3	0·7	2	9	3	0·3	27
Hail ..	0	0	0	0	0	0	0	0	0·1	0	0	0	0·1
Dust Storm ..	0·3	0	0	0	0	0·1	0	0	0	0	0	0	0.4
Squall ..	0·1	0·1	0·2	0·2	0·2	0·7	1·3	0·1	0·4	0·2	0·2	0	4
Fog ..	0	0·1	0·2	0	0	0	0	0	0	0·3	0·2	0·1	0·9
(Panaji)													
Thunder ..	0	0	0·2	1·4	1·2	7	1·4	1·4	3	7	3	0·6	16
Hail ..	0	0	0	0	0	0	0	0	0	0	0	0	0
Dust Storm ..	0	0	0	0	0	0	0	0	0	0	0	0	0
Squall ..	0	0	0	0	0	0·6	0·6	0	0·2	0	0	0	1·4
Fog ..	0·2	1·4	0·6	0	0	0	0·2	0·4	1·4	4	0·6	0·4	9

* Number of days 2 and above are given in whole numbers.

TABLE No. 6—(CLOUDINESS).—NUMBER OF DAYS WITH CLOUD AMOUNT (OKTA).

(*Mormugao*)

Month	Hour	Total Cloud amount	No. of days with Cloud amount ≥6 oktas	No. of days with Cloud amount ≤2 oktas
January	I	1·7	3	22
	II	1 8	2	23
February	I	1·9	2	20
	II	1·7	2	21
March	I	2·4	4	18
	II	2·0	2	20
April	I	3·6	6	11
	II	3·0	4	14
May ..	I	4·5	10	6
	II	3·9	7	10
June .. .	I	6 0	19	1
	II	6·0	21	1
July .	I	6·4	23	1
	II	6·6	24	0
August .	I	5·8	20	1
	II	5·9	21	1
September . ..	I	5·4	16	2
	II	5·4	17	2
October .. .	I	4 4	11	9
	II	4·7	13	6
November . ..	I	3·1	5	16
	II	3·3	7	13
December . .	I	2·2	4	20
	II	2·4	5	20

I—0830 hrs. IST II—1730 hrs. IST

FORESTS

The physiography of the Goa district chiefly comprises undulating terrain of western ghats in a series of hills with several off-shoots and spurs gradually merging in the west. In the east bordering Karnataka State, the hill ranges are precipitous upto an elevation of 1022·50 metres. The western ghat is the source of two prominent rivers in Goa *viz.* Mandovi and Zuari that flow off into the Arabian sea near Panaji and Vasco-da-Gama. Forests are mostly confined to the eastern portion of the western ghats in the foothill slopes of Satari, Sanguem, and Canacona talukas. Scattered in patches are several private forests owned by the village communidades, temples and private individuals that cover an area of about 256 square kilometres. The Government forests admeasure about 28·4 percent of the total land area.

Evergreen and Semi-Evergreen Forests

Along the north-eastern and south-eastern portions bordering Karnataka state, few evergreen and semi-evergreen vegetation occur in the deep gorges and ravines of Sanguem, Satari and Canacona talukas. On the precipitous aspect the tree growth is mostly stunted having low timber value. In this zone of forests the annual rainfall varies from 5,100 millimetres to 7,600 millimetres. The trees of common occurrence are Bobbi (*Calophyllum wightianum*), *Jambul* (Syzygium *cumuni*), Ambo (*mangifera indica*), Onval (*Mimusops elengi*), Otamb (*Artocarpus lakoocha*), Patpanas (*Artocarpus hirsuta*), Nag Gulum (*Mesua ferrea*), *Hopea wightiana*, Bhirand (*Garcina indica*), Gulum (*Machilus Macarantha*), Dalchini (*Cinnamomum zeylanicum*), Chandodo (*Macaranga peltata*), Bhenoro (*Sterculia guttata*), *Sideroxylon tomentosum*, Kalezad (*Diospyros embryopteris*), Bibo (*Semecarpus anacardium*), *Holigarna arnottiana*, *Glochidion hoenackeri*, *Hemigyrosa canescens*, *Euonymus indicus*, *Olea dioca*, *Heynea trijuga*, and *Mallotus albus*. The undergrowth is comprised of *Colebrookea oppositifolia*, *Wendlandia spp*, *Triumfetta rhomboidea*, *Hemigraphis spp*, *Callicarpa lanata*. *Scultia indica*, *Ixora brachiata*, *Woodfordia*, *floriabunda*, *Lobelia nicotianaefolia*, *Degregeasia velutina and Melastoma malabathricum*. The common bamboos occurring in these forests are Velu (*Bambusa arundinacea*), and Kanaki (*Dendrocalamus strictus*). Bhet (*Calamus tannuas*) is the important cane of evergreen belt. Kombal (*Gnetum scandens*), *Acacia intsia*, *Entada pusaetha*, *Tinospora Cordifolia*, *Cocculus macrocarpus*, *Stephania hernandifolia* and *Cissampelos pereira* are the common climbers of these dense forests. In the ravines, the tree growth is luxuriant with clear boles attaining a height of 10 to 15 metres. Both evergreen and semi-evergreen forests are distributed over an area of 256 square kilometres of which 50 percent of the area is inaccessible. The zone of evergreen forests has been classified as " A " class forests under the Portuguese regulation of Forests, set apart for preservation of climate, regulation of water flow and conservation of soils in the hilly tracts.

Moist Deciduous Forests (Commercially Potential)

Along the foot hill slopes of hill tract traversing from north to south and spurs leading towards west, in the talukas of Ponda, Canacona, Quepem, Sanguem and Satari, there are commercially potential forests categorized as " B " class for exploitation of the forest produce by the State to earn maximum profits and for regeneration of the crop on perpetual basis. This type of forest is distributed in about 385 square kilometres, providing the timber and fuel wood requirement of the district. Natural teak is of sporadic occurrence in these forests, yet the tract has rich potential for bearing teak. The prominent tree

species in this zone are Maretha (*Terminalia crenulata*) Quinzol (*Terminalia paniculata*), Zambo (*Xylia xylocarpa*), Nano (*Lagerstroemia lanceolata*), Ghoting (*Terminalia bellerica*), Sissoo (*Dalbergia latifolia*), Edu (*Adina cordifolia*), Kalam (*Mitragyna parvifolia*), Karmal (*Dillenia pentagyna*), Assan (*Pterocarpus marsupium*) and Kusum (*Schleichera oleosa*).

In the under storey the common tree species found are Dhaman (*Grewia illiaefolia*), Shiras (*Albizzia lebbek*), Belati (*Albizzia procera*), Kanvanch (*Bridelia retusa*), Shivan (*Gmelina arborea*), Moi (*Lannea coromandelica*), Bel (*Aegle marmelos*), Kadukavath (*Hydnocarpus laurifolia*), *Mallotus philippinensis*, Char (*Buchanania latifolia*), Khair (*Acacia catechu*), Shanta Kudo (*Wrightia tinctoria*) and Mumeo (*Careya arborea*).

The ground vegetation consists mostly of Galai (*Randia dumetorum*), Kevani (*Helicteres isora*), Karvi (*Strobilanthes callosus*), Jino (*Leea sambucina*), *Glycosmis pentaphylla*, *Ardisia solanacea*, *Ranbhendi* (*Urena lobata*), Karvand (*Carissa carandas*), *Flemingia congesta*, *Clerodendron infortunatum*, Nagur Cudo (*Holorrhena antihysenterica*) Karbel (*Murraya koenigli*), Adike (*Rauvolfia serpentina*) and *Tabernaemontana heynaena*. The common climbers of these forests are Ukshl (*Calycopteris floribunda*), Krishnasarva (*Ichnocarpus frutescens*) Gholival (*Smilax spp.*) Shembi (*Caesalpinia sepiaria*), Vagati (*Wagatea spicata*), *Caesalpinia nuga*, and Churan (*Zizphus rugosa*).

TABLE No. 7

TALUKA-WISE GEOGRAPHICAL AREA *Vis-a-vis* FOREST AREA (UNDER GOVERNMENT CONTROL)

Goa district	Geographical area in ha.	Forest area in ha.	Percentage forest area to geo-area
1	2	3	4
1. Tiswadi	16,612	....	...
2. Salcete	27,719	....	....
3. Bardez	26,480	...	....
4. Mormugao	7,831	....	....
5. Ponda	25,228	2,931	11·62
6. Bicholim	23,633	716	3·03
7. Pernem	24,200	1,319	5·45
8. Quepem	43,731	11,679	33·63
9. Sanguem	88,660	50,070	56·48
10 Canacona	34,736	14,328	41·25
11. Satari	51,284	24,252	47·29

Table No. 7 illustrates the geographical area covered by each taluka in the district of Goa.

A list of chief treal, shrubs, climbers, bamboos, grasses and ferns occuring in the forests of Goa is given in Appendix 2.

FLORA *

Introduction

Preparation of data on the botany of Goa and other Portuguese Colonies was very much neglected for nearly four centuries since the publication of "Coloquios dos Simples e Drogas da India" (Gracia da Orta, 1563) and "Tratodo de Las Drogas" (Acosta, 1578), in spite of intense activity from 1968, on the study of Indian plants from the regions in India all round these colonies by the various European botanists. The two Portuguese publications noted above, besides introducing to the western world a few of the commonly known Indian Medicinal plants, also covered a wide variety of subjects like socio-political conditions of that period etc., other than the botany of the Portuguese possessions. However, the Portuguese played a prominent role in the introduction of new plants from their New World territories. Subsequently, besides a small publication on the Natural History of Goa (D'Silva, 1862) with a list of hardly 163 species, during the fourth century celebrations of the Portuguese rule in India, "Flora de Goa e Savantwadi" (Dalgado, 1898) was published, presenting a list of 731 wild species and 279 cultivated species with vernacular names and very brief notes without any specific data on the localities and the specimens collected etc. In contrast to this, a contemporary work (Cooke, 1901-1908) on the flora of Western India (then British India) provides ample data based on herbarium methods of study.

The region under study comprises two distinct physographical units: the Goa region with semi-evergreen vegetation akin to evergreen forests of North Kanara district, Karnataka State; and Diu, Daman and Dadra and Nagar Haveli zone with vegetation similar to the coastal and hilly tract flora of the Gujarat State.

Vegetation and Analysis

The vegetation can be broadly classified into the following types: (i) Estuarine vegetation consisting of mangrove species along the narrow muddy banks of rivers; (ii) Strand vegetation along the few coastal belts; (iii) Plateau vegetation comprising low deciduous as well as moist deciduous species confined especially to the lower elevations of the ghats; (iv) Semi-evergreen and evergreen forests limited to patches along the upper elevation of the ghats.

Altitudinally, the estuarine and strand vegetation range from sea level to 50 m, the low deciduous and moist deciduous species fall

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[1] For details of flora in Daman and Diu see parts II and III respectively.

within 50-500 m and the semi-evergreen and evergreen forests occur from about 500 m upwards. Besides, the area abounds in many hydrophytes and grasslands which occur at all elevations. The composition of the various types of vegetation has been briefly analysed below :—

(i)*Estuarine vegetation of mangrove along swampy river banks.*—Botanically this zone is characterised by the peculiar root formations (stilt roots of *Rhizophora*, Pneumatophores in *Avicennia*, knee roots in *Bruguiera etc.*) and viviparous fruits for seed disposal in all genera.

Thickets of species of *Rhizophora, Bruguiera, Kandelia, Lumnitzera, Sonneratia* and *Avicennia* readily strike the eye. Often *Acanthus* represents pure formations and near the high tide mark.

(ii) *Strand and Greek vegetation along coastal belt.*—The vegetation along the south bank of river Mandovi near Panaji comprises tree species of *Pongamia, Thespesia Cerbera, Calophyllum,* and *Pandanus* some of which are exotics but naturalised, growing wild, whereas *Cocos nucifera* and *Casuarina equisetifolia* are extensively cultivated affording a picturesque view.

Along the rocky creeks and projecting ridges facing the coast, could be seen many herbaceous species of *Neanotis, Iphigenia, Scilla, Cyperus, Naregamia, Begonia,* etc.

(iii) *Plateau vegetation along undulating terrain and foot hills.*—A major portion of Goa belongs to this category with the scrub jungles extending from 50—200 m and the deciduous forests confined to 200—500 m altitude.

(a) *Open scrub jungle.*—Undulating rocky plateaus with scant vegetation are met with along Panaji to Cortalim, Panaji to Colvale, Cortalim to Margao and from Bicholim to Sanquelim, to mention a few which are due to manganese ore mining, " Kumeri " cultivation, over-grazing and other biotic factors. *Anacardium* is cultivated on an extensive scale. Severely eroded waste lands sustain patchy vegetation composed of dry deciduous species of *Carissa, Holarrhena, Lantana, Calicopteris, Woodfordia, Microcos, Grewia, Vitex,* etc. The majority of climbers are confined to families like *Menispermaceæ Vitaceæ Asclepiadaceæ Liliaceæ,* etc.

(b) *Moist deciduous forests.*—Forests around Tudal, Ordofond, Butpal, Molem, Codal, Ambiche Gol near Valpoi and Anmodc ghat are essentially moist deciduous and much of the forest area in Goa fall under the above type. The important components of the deciduous forests belong to species of *Rubiaceæ, Bignoniaceæ, Anacardiaceæ, Sapindaceæ, Fabaceæ, Caesalpiniaceæ* and *Mimosaceæ.*

The ground flora in forest clearings and exposed situations comprise members of *Fabaceæ*, *Acanthaceæ*, *Rubiaceæ*, *Euphorbiaceæ*. *Asteraceæ*, *Lamiaceæ*. Also fern species of *Pteris*, *Selaginella* and *Ophiglossum* are seen on the moist forest floor.

(iv) *Semi-evergreen and evergreen vegetation along the upper ghats.*

(a) Semi-evergreen : The tallest trees are composed of species of *Michelia*, *Cryptocarya*, *Actinodaphne*, *Ficus*, *Lagerstroemia*, *Pterospermum*, etc., mixed with smaller tree species of *Alseodaphne*, *Glochidion*, *Ixora*, *Bischofia*, *Macaranga*, *Hopea*, etc.

(b) *Evergreen forests.*—The evergreen forests never reach the climax in Goa area as they do in North Kanara district in Karnataka State but represents a good transitional zone which actually starts from Ponda-Ambolim-Ramghat belt of the South Ratnagiri district The transition from the semi-evergreen forests to the evergreen is gradual and almost imperceptible. The tree components are selected and few limited to such families as Clusiaceæ, Ebenaceæ, Lauraceæ, Moraceæ, Euphorbiaceæ and Burseraceæ. The lofty trees belong to species of *Calophyllum*, *Carcinia*, *Canarium*, *Lophopetalum*, *Chrysophyllum*, *Palaquium*, *Artocarpus*, *Diospyros* and *Khema* whereas the medium sized tree species are composed to *Litsea*, *Ficus*, *Aporosa*, *Antidesma*, *Carallia*, *Evodia* and *Mallotus*.

As compared to the evergreen forests of North Kanara, the epiphytes are comparatively poor, limited mostly to members of *Orchidaceæ*, *Asclepiadaceæ and Araceæ*. A few species of *Ultricularia*, *Habenaria*, and *Begonia* are seen in the crevices of tree bark wherever there is a little soil and moisture, thus superficially appearing as epipytes. Species of *Dynaria Microsorium* are some of the common epiphytic ferns. The root parasites belong to members of *Scroplulariaceæ Santalaceæ* and *Orobanchaceæ*. The stemparasites are predominantly composed of members of *Loranthaceæ*. The terrestrial orchids include species of *Platanthera*, *Nervilia*, *Malaxis* together with species of Habenaria and *Peristylus*.

Hydrophites.—Under hydrophytes, the free floating as well as the marshy plants have been included irrespective of the forest classifications. The vegetation is monotonous containing many ubiquitous species and are independent of the macroclimate. The rooting marshy plants include species of *Nelumbo*, *Nymphea*, *Monochoria* and species of *Eriocaulon*. *Polygonum*, *Cryptocoryne*, etc. besides many sedges and grasses. *Acrostichum*, the littoral fern grows along back water near Tirem (Satari taluka) and is rather rare. The submerged aquatics are composed of species of *Ceratophyllum*, *Naja*, *Blyxa*, *Hydrilla*, *Ottelia* and *Vallisneria*, *etc*. Among the hydrophytes that extensively cover the surface of water are *Ipomæa*, *Utricularia*, *Myrophyllum*, *Neptunia* and *Pistia*.

In the fast flowing streams attached to the rocks are seen members of Podostemaceæ, belonging to such species of *Polypleurum*, *Griffithella*, *Hydrobryopsis* and *Terniola*.

Grasslands.—Patches of grasslands occur in the plains of Goa especially in low lying areas along the undulating plateau and tall grasses dominate practically suppressing other herbaceous vegetation. The region near Onda is one such fertile area. In such swampy regions, species of *Isachne*, *Jansenella*, *Pseudoraphis*, *Saccharum*, *Sacciolepis*, *Hygroryza* and *Paspalidium* dominate. Along rocky slopes species of *Manisuris*, *Themeda*, *Eragrostis* and *Digitaria* occur.

Economic and Medicinal plants.—Species of *Cocos*, *Anacardium*, *Mangifera*, *Ananas*, *Areca*, *Piper*, *Artocarpus*, *Musa*, *Citrus* and *Psidium* and their cultivation and further development on commercial basis are quite well known. Species of *Garcinia*, *Cinamomum*, *Myristica*, *Murraya* as condiments deserve a mention for their utility. A few other plants like species of *Flacourtia*, *Averrhoa*, *Litchi*, *Phyllanthus* are also grown for their edible fruits.

As for the timber, variety of woods are in demand with the developing industrialisation and some of the species suggested here are known for their quality of wood. With proper management of deciduous and semi-evergreen forests, most of the species can be brought into the approved range of species required for wood-based industries. Besides the well-known timber species of *Terminalia*, *Tectona*, *Lannea*, *Dalbergia*, *Xylia*, *Lagerstroemia*, etc. tree species of *Saccopetalum*, *Hopea*, *Sterculia*, *Pterocarpus*, *Pongamia*, *Bridelia*, *Dillenia*, *Holigarna*, *Syzygium*, *Mitragyna*, *Madhuca* also deserve special attention. Though *Tectona grandis*, the teak does not occur wild it may be possible to successfully introduce and cultivate on selected plots as seen from the forty year old teak plantations at Valpoi which present satisfactory growth.

For extraction of fibre, oils, gums, etc. several species are known to yield suitable material. Species of *Sarcostigma*, *Blumea*, *Guizotia*, *Carthamus*, *Mimusops*, *Origanum*, *Thymus*, *Santalum*, *Croton*, *Hitchenia*, *Vetiveria*, *Cymbopogon*, etc. are quite important as oil producing plants. *Corchorus*, *Crotalaria*, *Calamus*, *Caryota*, are some of the fibre yielding plants whereas Sterculia is a good source of "Karaya" gum used as a food preservative.

The grasslands of Goa harbour many economic fodder grasses which could be profitably utilised through proper farm management. The highly palatable fodder grasses include species of *Centotheca*, *Cynodon*, *Echinochloa*, *Hygroryza*, *Isachne*, *Paspalidium*, *Digitaria*, *Setaria* and *Themeda* The common legumes that occur in this region are species

of *Desmodium, Geissaspis, Goniogyna, Alysicarpus, Indigofera, Phaseolus, Sesbania, Smithia, Cassia, Vigna, Zornia, Tephorosia*, etc. which are well known for their forage value but in nature these do not occur in proper proportion. By selecting much of the indigenous rich legumes that are common in Goa and by broadcasting the seeds during the early monsoon, the nutritive value of the fodder grass can be considerably enhanced.

The area is quite rich in medicinal plants. There is a good possibility of introduction and cultivation of several useful species required by the Pharmaceutical firms of Bombay who have already been planning for cultivation and propagation of specific medicinal plants. To mention a few, species like *Salacia Chinensis, Rubia Cordifolia, Spilanthes paniculata, Plumbago, indica, Holarrhena antidysenterica, Rauvolfia serpentina, Gymnema sylvestre, Tylophora indica, Hemidesmus indicus, Strychnos nux-vomica, Solanum nigrum, Withania somnifera, Adhatoda vasica, Hygrophila auriculata, Ocimum basilicum, Coleus amboinicus, Zingiber officinale, Cnsete superbum, Curculigo orchioides, Aloe Barbadensis. Asparagus racemosus* var. *javanicus and Gloriosa superba* well known for their medicinal value, grow under natural conditions in Goa forests. A detailed list of the medicinal plants found in the district is given in the Appendix 3.

Plants of Botanical value.—The flora of the region abounds in interesting species of botanical value both from the taxonomic as well as academic point of view especially for student community. Quite a few species have been found to be new to the science like *Manisuris goensis, Arthrason lancifolius* var. *hindustanicus* and species of *Fimbristylis* etc., *Ceropegia fantastica*, a rare plant has been collected again after a lapse of over 50 years. *Drosera indica*, species of *Utricularia*, members of Podostemaceæ like *Polypleurum stylosum, Griffithella hookeriana, Hydrobryopsis sessile, Terniola Zeylanica* and parasites like *Aeginetia indica and* species of *Dendrophthœ, Helixanthera, Helicanthes, Loranthus, Macrosolen* and *Viscum* are quite interesting enough. Orchids both terrestrial and epiphytic species of *Plantanthera, Habenaria, Liparis, Eulophia, Pholidota, Cymbidium, Dendorobium, Vanda*, etc., deserve special mention. The Pteridophyte flora is equally rich with species of *Selaginella, Ophioglossum fibrosum, Angiopteris evecta, Acrostichum aureum, Schizoloma heterophyllum* and several others.

Analysis of Flora.—During the survey on the flora of Goa region, 1,115 species of Angiosperms belonging to 657 genera arranged into 144 families have been collected. Of these 891 species under 538 genera classified under 120 families belong to Dicotyledons and 224 species under 119 genera presented under 24 families are Monocotyledons. A few Pteridophytes numbering 25 species representing 24 genera

arranged under 11 families have, however, been collected wherever available. *Gnetum ula* is the only Gymnosperm that grows wild in these forests. While analysing the number of wild species represented by each family, it is evident that there are 21 families which present more than 15 species and each such number together with the number of genera within brackets are given below against each family following the order of dominance :—

I. Fabaceæ—79 (33);	II. Poaceæ—68 (44);
III. Euphorbiaceæ—51 (28);	IV. Cyperaceæ—48 (9);
V. Rubiaceæ—46 (28);	VI. Acanthaceæ—42 (27);
VII. Asteraceæ—41 (31);	VIII. Convolvulaceæ—33 (12);
IX. Malvaceæ—26 (11);	X. Lamiaceæ—22 (14);
XI. Mimosaceæ—22 (9);	XII. Orchidaceæ—21 (16);
XIII. Scrophulariaceæ—20 (10);	XIV. Cæsalpiniaceæ—20 (8);
XV. Moraceæ—19 (4);	XVI. Verbenaceæ—18 (11);
XVII. Commelinaceæ—18 (5);	XVIII. Vitaceæ—18 (5);
XIX. Asclepiadaceæ—17 (13);	XX. Cucurbitaceæ—17 (12);
XXI. Apocynaceæ—16 (14).	

WILD ANIMALS AND BIRDS

The common animals found in the Goa forests are as under :—

Vanmanus—Slender Loris (*Loris tardigradus*) is occasionally found in the dense forests of Molem and Canacona. In the Monkey family, Makad (*Macaca radiata*) and Vanar (*Presbytis entellus*) are of common occurrence all over the district. Among the cat family, tigers (*Panthera tigris*) found are particularly stray. There may be two to three in the whole district. The Leopard (*Panthera paradus*), toddy cat (*Paradoxurus hermaphroditus*) and Ranmanjar (*Felis chaus*) are among those animals commonly found. The common mongoose (*Herepeste edwardsi*) is found near the habitations. Bhalu (*Melvrsus ursinus*) is not uncommon in the district. The jackals (*Canis aureus*) are seen even during the daytime, roaming freely. Ud—the common otter (*Lutra lutra*) can be seen at water ponds. The fulvous fruit bat (*Rousettus leshenaulti*), flying foxes (*Pteropus gigantus*) and short nosed fruit bats (*Cynopterus sphinx*) are found at dusk. The Shankro (*Ratufa bicolor*) always attracts the attention of any intruder in the forest by a peculiar call. Their nests are always found in the forests of Molem, Valpoi and Canacona.

Channi—three striped palm squirrels (*Funambulus palmarum*) are found on ficus trees. In the rodent family the Indian Field Mouse (*Mus booduga*) and *Undir*—the common house rat (*Rattus rattus*), the Indian Gerbille (*Tatera indica*), and Koli—Undir (*Bandicot indica*) are found in plentiful. The common Sal—the Indian Porcupine (*Chystrix indica*) is renowned for damaging the teak and cashew seedlings. On grassy

banks. Hares (*Lepus nigricollis ruficaudatus*) are found all over the forests. The Gave reda—Gaur (*Bos gaurus*) in few herds, are found in Codal valley, Molem valley, Salguinim, Zuna, Netorli and in Canacona. Among the Antelopes, Sambars—Meru (*Cervus unicolor*), Chital (*Axix Axis*), Bhenkare—the barking deer (*Muntiacus muntiak*) and mouse deer (*Tragulus memina*) are found throughout the forests of the district. Frequent shooting of Sambar and deers has considerably lowered their population. The Ran Dukar—the wild boar (*Sus scrofa*) are in plenty particularly in cashew fruiting season but always suffer at the point of guns of poachers who kill these animals under the guise of crop protection. Tiryo the *Pangolin* (*Manis crassi-caudata*) is of rare occurrence and rarely seen on the trees while sucking ants.

The district is endowed with a variety of magnificent avifauna. A majority of bird groups receive protection from the shikaris, probably due to religious sentiments. The habitat for variety of birds from open forests to scrubby tracts and dense forests are ideal for breeding. The important birds are listed below :—

Egrets: The little egret (*Egretta gazetta*), cattle egret (*Bubulcus ibis*), the Indian Reef Heron (*Egretta gularis*) and the Paddy Bird (*Ardeola grayii*) are always seen crouching at the water ponds and estuaries.

Eagles : Passass Fishing Eagle (*Haliaeetus leucoryphus*) and the Barhminy Kite (*Haliastur indus*) are frequently seen confined to the jeels along the riverside.

Vultures : The Black or Kind (*Torgos calvus*) and the white backed (*Gyps bengalensis*) are the occasional scavengers on the animal carcass.

Pheasants : the crow-pheasant (*Centropus sinensis*) is seen hopping down the tree branches.

Pea Fowls : (*Pavo cistatus*) are of sporadic occurrence in the forests of Pernem and Satari.

The Jungle Fowls : The Grey Fowl (*Gallus sonneratti*) are commonly seen around Bamboo thickets at Molem, Sancorden, Valpoi, Sanguem and Canacona forests.

The Jungle Quails : Buch Quails (*Perdicula asiatica*) is felt anywhere in the forests by their sudden whirr of wings.

The White Breasted Water Hens : (*Amauronis pheonicurus*) are frequently noticed in monsoon wandering majestically near the water logged areas.

Pigeons : The common Grey Pigeon (*Teeron phœnicopters*), the Blue Rock Pigeons (*Columba livia*), the Dove (*Chalcophaps indica*), the Red Turtle Dove (*Streptopelia transquebarica*), the Spotted Dove (*Streptopelia chinensis*) and the little Brown Dove (*Streptopelia senegalensis*) are quite common. But the Shikaris always prefer spotted Doves for their delicious flesh.

Parrots : The large Parakeet (*Psittacula eupatria*), the Rose Ringed Parakeet (*Psittacula krameri*), the Blossom headed Parakeet (*Psittacula cynocaphala*) and the Lorrikeet (*Loriculus vernalis*) are seen in large flocks over the food crops and mango orchards.

Cuckoos : The Pied Crested Cuckoo (*Clamator jacobinus*), the Koel (*Eudynamys scolopacea*) are very common. The Koels are conspicuous during the spring with the melodious call from leafy trees particularly from the mango orchards.

Owls : Among owls, the Bard (*Tyto alba*), spotted Owlet (*Athene brama*) and the barred Jungle Owlet (*Glaucidium radiatum*) are common in open forests.

Kingfishers : The Pied Kingfisher (*Ceryle rudis*), the common Kingfisher (*Alcedo athis*), the white breasted Kingfisher (*Halycycon amyrnessis*), the Black capped Kingfisher (*Halycyon pileata*) and the brown headed stork billed kingfisher are always found at jeels and water ponds.

Bee-eater : The Blue tailed Bee-eater (*Merops philippinus*) is very conspicuous mostly over the area covered up with rice fields.

The Indian Roller : (*Coracias benghalensis*) is the commonest kind of bird of this tract.

The Hoopoe : (*Upupa epops*) with black and white zebra markings on wings and tail and with a prominent crest is always felt more by its musical h o o o-p o-p o in the heart of the forest.

The common Grey Hornbills : (*Tockus birostris*) are seen on tall fully crowned old trees in Valpoi forests.

The Blue Throated barbets : (*Megalaima asiatica*) are often heard widely in the forests with its familiar call. Birds like woodpeckers (*Dendrocopos mahrattensis*) and Goldenbacked Woodpecker (*Dinopium benghalense*) are frequently seen while climbing the tree trunks.

Swallow : The common Swallow (*Hirundo rustica*) and the wiretailed swallow (*Hirundo smithii*) are very common.

Shrikes : The Grey Shrike (*Lanius excubitor*), the Rufousbacked Shrike (*Lanius schach*) are found.

Oriole : The Golden Oriole (*Oriolus oriolus*), the blackheaded oriole (*Oriolus xanthornus*).

Drongos : The black Drongo (*Dicrurus adsimilis*), the Racket-tailed Drongo (*Discrurus paradiseus*).

Mynas : The Hill Myna (*Gracula religiousa*), the Rosy Pastor (*Sturnus roseus*), the common Myna (*Acridotheres tristis*).

Crows and tree Pies : The house crow (*Corvus splendens*), the Jungle Crow (*Corvus marcrorhynchos*) and the Tree Pies (*Dendrocitta vagabunda*) are distributed throughout the district.

The Black headed Cuckoo-Shrike : (*Coracina melanoptera*) and scarlet, Minivet (*Pericrocotus flammeus*) are of frequent occurrence.

Bulbuls : The Goldfronted Chloropsis or Green Bulbul (*Chloropsis aurifrons*), the Gold mantled Chloropsis (*Chloropsis cochinchinesis*), the Redvented Bulbul (*Pycnonotus cafer*), the White cheeked Bulbuls (*Pycnonotus leucogenys*) and the Redwhiskered Bulbul (*Pycnonotus jocosus*) are very common.

Babblers : The Jungle babblers (*Turdoides striatus*) and the common Babbler (*Turdoides caudatus*) are found.

Flycatchers : Tickell's Blue Flycatcher (*Muscicapa tickelliae*), the verditer flycatcher (*Muscicapa thalassina*) and the Paradise Flycatcher (*Terpsiphone paradisi*) are common.

The Tailor Bird : (*Orthotomus sutorius*) is commonly seen and heard by the familiar call towit—towit—towit.

Thrushes : The white throated Ground Thrush (*Zoothera citrina*) and the Blue Rock Thrush (*Monticola solitarius*) are found.

The Magpie-Robin : (*Copsychus saularius*), the Shama (*Copsychus malbaricus*) and the black bird (*Turdus merula*) are the birds of common occurrence.

Wagtails : The large Pied Wagtail (*Motacilla maderaspatensis*).

The House Sparrow : (*Passer domesticus*) is quite common.

Weaver Birds : The common weaver bird (*Ploceus manvar*) are found.

Munias : The whitebacked Munia (*Lonchura striata*) and the Black-headed munia (*Lonchura malacca*) are quite common.

The annual migratory water-fowls are not uncommon. A flock of about five thousand fowls are seen at Carambolim and Corlim water ponds.

Wild Life Sanctuaries

The Union Territory has in all three Wild Life Sanctuaries, that were constituted after the liberation of the district. These are at Bondla, Cotigao and Molem with an area of 8 square kilometres, 105 square kilometres and 240 square kilometres respectively. The Wild Life Sanctuaries provide maximum protection to the wild animals within their precincts. Shooting of animals in these sanctuaries is completely banned and adequate facilities for drinking water and grazing are provided to the animals. Common wild animals found in these sanctuaries are the leopard, wild boar, sambar, spotted deer, gaur, barking deer, hares, mouse deer, pangolins, slender loris, jungle cats, jackals, malayan giant squirrels and civet cats and colourful birds. Among reptiles, pythons and cobras are quite common. Jungle fowls are also found in the sanctuaries. The wild life sanctuaries were fuly constituted under the enactment of wild animals and wild birds protection Act, 1965.

Fishes

The number of varieties of fish are found in the territorial waters of the district. A brief description of the variety of fishes is given in the Appendix 4.

SNAKES[1]

The topography makes this region highly suited for an abundance of flora which require heavy rainfall and consequently a similar kind of fauna. Snakes, therefore, are also present in large number in this region. The total number of snake bite cases recorded in the year 1969 were 296, of which 17 were fatal. In fact, in one of the taluka places of Valpoi, we found at Compordem the local people mentioning that there are cases of snake bite that come to the region and number about 200 per year from that region along. Apart from this, the beautiful fertile region of Ponda taluka abounds in a number of temples and places of worship and in many of these temples there are a number of marks and designs that go to show the presence of snakes, particularly the cobra snake in that area.

It is very interesting to note that apart from the silver idols of cobra snake kept at many temples, the famous temple of Shree Shantadurga, at Queula, shows two cobras being held by the upper hand of the famous deity. The cobra heads are between the grip and the body of the cobra is entwining the arms. The Shantadurga Devi idol at Velinga, shows the Goddess in front of a white-ant mound. There is a belief that cobras live in such mounds. It will be worth investigating whether the goddess idols in different regions of Goa have similar indications where the goddess is holding the cobra in her hand, or resting near the habitation of a cobra. It will also reveal some old historical facts and may indicate that either the cobra worship or subjugation of the cobra may have been common in very old times.

The names of the snakes unfortunately are slightly different in different places but the following list will indicate the vernacular names of different snakes. Few of the konkani names of some snakes are Mandol (Kusdia or agia), Rat Mandol, Phurshem, Kaner (Sath fur), Malun (malvan), Sodne (nagin), Haryali (sarpatol), Divad, Torava (Therava), Gonos, Har, Hevalem, Sulava, Pasko, Gainor, Pansarp, Kusdo, Chambdi, Nanaki and Chapada.

The following snakes found in the district have been classified in two groups, viz. non-poisonous and poisonous :—

Non-Poisonous

Typhlops braminus (Daudin).—The common blind snake. This snake is locally called as Sulava. It looks like an earthworm but is slightly

[1] This section is contributed by Dr. P. G. Deoras, Scientist, Bandra, Bombay.

bigger than a normal earthworm and it has scales on the body which are imbricate. It has no circular divisions as one meets in the case of earthworms. In the forests leading to Valpoi one can always meet this snake near rotting tree trunks. It has a small spine at the tail-end and the mouth in front is constantly moving. There are no teeth in this snake on the upper jaw. It is absolutely harmless and feeds in normal circumstances on rotting material roundabout the trees. In some regions of the State forests, there is another variety of blind snake called *Typhlops acutus*. This snake has a small projection in front of the mouth, which looks like a snout. It is slightly sharp and the tail of the snake ends in a small spine. The length of the snake when full grown is about 500 mm.

Uropeltis ocellatus.—Locally known as *torava*. This rough tailed snake is sometimes met with in the hill regions adjoining the Karnataka border of the territory. It grows to about 530 mm. with a diameter of 15 mm It has a very beautiful coloration and it is slightly yellowish brown on the top surface and uniformly yellow on the lower surface. It produces about 4 to 5 young ones at a time but it does not lay eggs.

Eryx conicus.—(the Russell Sand Boa) Locally known as *Malun*. This is a very common snake found even at a height of 3,000 ft. It grows to about 590 mm. the females being much longer. It is chocolate brown on the top surface with blotches of grey pattern spread all over the body. The tail is blunt and looks like the head, that is why many people believe the snake as having two heads. There is also a belief that this snake moves for 6 months from the tail end and 6 months from the head end. This is not true. It has nice small eyes on the head region and it prefers to remain buried in the soil. When constantly disturbed, it darts at the victim and strikes the body ferociously running away as soon as possible. It feeds on frogs, small mammals, lizards and birds. It lays about 8 to 9 young ones at a time. There is another variety of sand boa very commonly met with, in this territory. It is called *Eryx Johni*, commonly called *hevalem*. This snake is bigger than the first variety, but is uniformly chocolate brown, with no spots anywhere on the body. It is an extremely lethargic snake and anyone can handle it without any fear of the snake biting. Some people even rear this snake as a pet in their houses. It grows to about 900 mm. and the females are also bigger than the males. It also lays about 6 to 8 young ones. It feeds on mice, lizards, small frogs and small birds.

Python molurus (Indian python)—This snake is locally called *har*. It is available in the rocky regions of the hill ranges where there is plenty of water in the stream. It has been seen to grow upto 14 feet (43,000 mm) in length and weights as much as ½ maund i.e. 40 kilos. It has a girth of 2 feet (5,500 mm). It is completely chocolate brown

with bluish grey patterns all over the body. The head has a lance shaped arrow mark in grey colour and the head is marked by grey blotches. It catches the victim by the teeth and strangles it to death by the tail before the prey is swallowed. It has been seen to attack goats and deer also. Normally it feeds on small mammals and birds. It is a peculiarity of this snake that at the base of the tail and near the anus there are two 1½ inch (40 mm) long pointed stubs sticking out from the sides of the anus. The python lays pretty big eggs and many people eat the eggs, not only that but many tribes eat the snake itself, and it is supposed to taste as good as chicken.

Acrochordus granulatus (Indian wart snake)—Locally known as *pan-sarp*. It is not a very common snake but is met with in the slopes of the mountainous regions. It looks very horrible since the scales on the head have become diminutive, pointed and horny. It grows to about 1,100 mm. with a girth of 200 to 300 mm. It is not as poisonous as it looks and can be handled with care without being bitten. It is dark grey and partly blackish with white cross bars and dark bands round the body. There are a few spots in grey colour on the head. It lays about 8 to 9 young ones. One meets this snake also in the esturian regions of the territory.

Elaphe helena (the trinket snake)—Locally it is known as *gainor*. This is a pretty common snake growing to nearly 1,000 mm. in length, and about 90 mm. in girth. It is light or dark brown above with black cross bars containing white spots which are very conspicuous towards the head region. There is a broad dark stripe on each side which goes to the front into a vertical streak below the eye The lower parts are uniformly yellowish. It is an extremely active snake which is very vicious and runs after its food which consists of small mammals, lizards, frogs and sometimes smaler snakes. When excited, the snake will assume an attitude of defiance but may not strike immediately. It lays eggs in June to the tune of 20 to 25 in number.

Ptyas mucosus (Dhaman, Indian rat snake).—It is locally known as *sodne nagin* or *Dhamin*. This is a very common snake specially of the plains and many a time it will be seen in the house and also in the farm areas. It grows to about 9 feet (3,700 mm.) in length and is camel yellow in colour with black borders, to the scales specially in the tail or the head region. There is another variety of this snake which is slightly brown in colour. This too is found in different regions of the territory. It is an extremely agile snake. This snake jumps up the tree also and it feeds on rats, birds and frogs. It is a very good predator of rats. Apart from this, it leaves a very foul smell on the body and which many people think starts decomposing. This is not true. The foul smell can be washed away with soap and water. The snake lays about 30 eggs

buried in the soil and many people eat these eggs. The difference between the eggs of a rat snake and fowl is that these eggs are blunt at both ends though they are twice the size of fowl eggs.

Oligodon Tæniolatus (Gerdon).—This snake is locally known as *Pasko*. This snake is very common in the farmlands and one can meet it in the gardens. It grows to about 2½ feet or 762 mm. in length and has brown spots on the body which look like cross lines and there are also green lines at the sides. The cross lines are very prominent and that is why many a time this snake is mistaken to be a krait. It is a very harmless snake and is found all over the territory. The distinction between this snake and the krait lies in the fact that in the latter the central row of dorsel scales is hexagonal, while in this snake all the scales are more or less equal. It feeds on very small mammals, lizards and tiny reptiles. It lays eggs in the soil which hatch during the rainy season.

There is another variety of this snake called (*Oligodon arnensis*) (Shaw) which has no defined cross lines on the body.

Ahætulla ahætulla (Linnaeus).—Painted bronze back. This snake is not very common and people mistake it to be a *pasco* (oligodon). It is bronze coloured on the upper surface with cream coloured stripes on the sides and dark brown stripes over them. The lower part of the body is yellowish or sometimes greenish. The head has got a black stripe which goes below the eyes and passes up to the neck. The upper lip and lower jaw are yellow. It lays eggs and is an absolutely harmless snake.

Ahætulla Grandoculis (Boulenger)—This is another species of the same snake. which is olive brown above with small black irregularly distributed blotches on the dorsel side. The eyes are bordered with white rings and the lower parts are olive. There are three black lines along the tail. This snake is found along the Karnataka border right upto Canara.

Chrysopelea ornata (Shaw).—Golden tree snake. It is a beautiful coloured snake which some people call *kalinagin*. It grows to about a thousand mm. in length and about 200 mm. in breadth. The colour is variable, even running to black with narrow pale greenish cross bars. As age advances, the green colour increases in extent. Many a time, the scales are edged with black, showing that there are cross bars. The subsaudals are edged with black. They hang from the trees and are often pest to a person who is climbing. They are even seen to jump from branch to branch, feeding on lizards, geckos, small mammals, birds, insects and even small snakes. It catches the victim by the mouth and crushes it by the pressure of the coils from the tail. It has been

seen to jump to 20 feet or 20,000 mm. It lays elongated eggs, upto twelve at a time. It is a very common snake in the hilly forest regions.

Lycodon aulicus (Linnæus)—The common wolf snake. This is a snake which local people call *kavdya,* which means that it has on its greyish brown body, spots which look like cowries. It is grey and these dark spots of cowrie look like cross bars and many a time this snake is mistaken to be a krait, but it has not got the hexagonal dorsal scales of the krait. The cross bars range from 12 to 19 and expand laterally enclosing triangular patches. The upper lip is white and is spotted with brown. It is a very common snake and can even be met with near human habitation, in houses, gardens, between stones and bricks. It is absolutely harmless.

Natrix piscator (Schneider)—The checkered keelback. This is the common water snake met with in muddy places. It is locally called *Divad.* It grows to 4 feet or 1,219 mm. in length and about 3 inches or 76 mm. in diameter. The colour is very deep brown and the body has a checkered board mark all over except on the lower side. The eyes and the upper lips are also bordered with black marks. It inhabits the muddy waters feeding on frogs, fishes primarily, but may take to small mammals also. It lays eggs in the month of June, which hatch before the rains commence. It is a prolific feeder which can devour enormous amounts of frogs and fishes.

Natrix stolata (Linnæus)—Striped keelback. This is the snake which is called *Naneti* and one can meet this snake during the rainy season on the roadside. It grows to about 800 mm. in length and 150 mm. in breadth. The colour is deep grey with faint brown spots at the sides. It feeds on insects, fishes and small frogs. It is an extremely docile snake and many people keep it as a pet. It lays tiny eggs before the rains.

Natrix beddomei (Gunther)—Beddon's keelback. This is another variety of keelback snakes which is about 600 mm. long and is olive brown above the series of yellow spots, each one between two black spots. The belly is whitish, dotted with brown on the sides. The top of the head in the young, is very light brown speckled with dark brown in the centre. On the young one, there are yellow spots on the back. It has been noted to have been found at high altitudes even upto 6,000 feet.

Macropisthodon plumbicolor (Cantor)—Green keelback. This snake is found in the hilly districts. It grows to about 500 mm. in length. It is grass green with an inverted 'V' shaped dark mark from the neck all over the body. There are two black streaks behind the eyes. The belly is whitish, rarely with black spots.

Boiga trigonata (Schneider)—Indian gamma. This snake is often called the Cat snake also, and many people call it *manjra.* It grows to

4 feet or 1,219 mm. the girth being 762 mm. The body is wheat brown with greyish spots here and there. In the neck region are deep brown thick lines which start from the base of the head and go two inches further. It lays eggs before the monsoons.

Dryhopis nasutus (Lacepede)—Common green whip snake. This snake is called *haryali* or *sarpatol*. This is a beautiful parrot green snake which is like a whip extending oftentimes to 1,220 mm. The end surface is faint green in colour. At the sides are found yellow spots. The head is elongated and there is a long snout in front of the mouth, at the sides of which are situated the nostrils. The eyes are pretty big, round with faint greyish green pupils. It mixes so much with the grass colour or tree branches that it is very difficult, many a time, to locate it on the trees. It keeps the front region of its head up to six inches hanging and shaking as if a branch of the tree is flying in the wind. It lays eggs before the rains.

There is another snake of the same species. It is *Dryophis pulverulentus (Dumeril Bibron)*; brown whip snake. It is brown in colour otherwise it is the same.

Poisonous

Naja naja (Linnæus)—the Indian cobra. This is the common cobra (naga) of the region. It is found all over the territory even at an altitude of five thousand feet, and also near human habitation. There are three varieties seen. One is wheat brown in colour with very faint brown markings in the anterior region and a binocoellate mark on the head. The tips of the mark have black spots. On the end surface of the head are very faint black pads numbering three and extending to a number of rows of scales. The other variety is also wheat brown but has fewer faint black cross lines in the anterior lower region. There are few kinds which are deep wheat brown but do not have a binocœllate mark on the head. All these are cobra snakes. The snakes grow to a length of maximum 1,828 mm. and a girth of a maximum of five inches or 127 mm. It lays eggs to the tune of 60, during the month of March/April and the young cobra snakes hatch out at the onset of rains. Their bite will also be lethal. The cobra snake has to inject 12 mm. of venom to be lethal to kill a normal sized human being. In olden times, venom of these snakes was used to make a medicine called *shuchika bharanaras*. This medicine, when given to a patient suffering from cholera, used to retard the peristaltic motion of the digestive tract and this saved the patient from dehydration and sure death by cholera. The poison of this snake is neurotoxic. There is not much of pain at the site of the bite but when injected in sufficient dose, the reaction starts within 6 to 8 minutes. If no remedy is available, the patient feels a benumbing sensation at the tip of the appendages

which gradually travel up till the breathing muscles are paralysed and the patient grasps for breath and dies of respiratory failure. The only sure remedy against this bite is an antivenin.

Naja Hannah—It is called a king cobra (Raj nag). The adult may reach a length of 4,270 mm. It is sometimes met with in the region bordering the Londa forest of Karnataka State. However, it is a very rare snake which is olivacious brown with yellow and black thick stripes all over the body including the head. On the under surface of the head are thin black lines in the form of a stripe, as in the case of a cobra, but these are four in number while in the case of the ordinary cobra there are three only. Another difference between the common cobra and this cobra is that though both have three scales behind the eye, the king cobra does not have a triangle between the fourth and the fifth lower lip scales and it has an additional scale on the upper head beyond the frontal. There are no marks on the hood which is less broad than the ordinary cobra. However, this snake raises the hood upto three feet and it feeds only on other snakes. It is found in forests, abounding in bamboo plantations and has been known to lay eggs between bamboo leaves. The venom of this snake is neurotoxic, but the amount of venom given is much more than the ordinary cobra and that is why the victims succumb much earlier to the bite of this snake than to that of the other cobra. The antivenin against the venon of ordinary cobra could be useful for this snake also. It lays eggs and the snakes hatch out before the monsoons.

Bungarus cærulaus (Schneider)—Common Indian Krait. This is locally called *Kaner* or *maniar*. It is steel blue in colour with white cross stripes all over the body. In the centre region of the upper surface it has one row of hexagonal scales. In the lower region of the tail beyond the anus the ventral scales are single. These two, are the characteristics of a krait. There is a belief that it makes a shrill noise like that of a bird. It lays eggs before the monsoons and the young born of the krait are as much poisonous as the adult. The poison of the snake is neurotoxic and for an ordinary sized man, one would need only 6 milligrams to kill him. In the case of cobra it is 12 mg. that means, that the poison of this snake is twice as toxic as that of a cobra. The bite does not give any pain or any swelling and the patient just sleeps to death. The only sure remedy against this poison is an antivenin.

Callophis nigrescens—This coral snake is called *raat*, in local language. It is pink on the underside and grey above with black markings all over the body. The head is also black. The snake does not grow more than 2 feet or 6,000 mm. and there is a belief that a person bitten by this snake will not survive the night and that is why

it is called *raat*. The poison is neurotoxic and the patient could be saved by giving him antivenin. This snake lays eggs and is found in mountainous regions feeding on frogs and small mammals.

Enhydrina schistosa (Daudin)— This sea snake is called *kusada* in konkani and is found all over Goa in the coastal regions. It is deep grey in colour with chocolate brown stripes cross-wise all over the body. The head is small and the lower part of the body is cohesed to form a small ridge at the base and the tail has become completely flat like an oar. The fisherfolk often encounter it with their catch of the fishes and they throw this snake on the beach. Unfortunately, this snake cannot move on the land surface as its body is adapted only for swimming. It therefore dies out when kept on the beach and one can meet these snakes dead on the beach. It is very poisonous but the poison fangs are situated slightly behind in the jaw and it does not get a good grip to give a good bite. Secondly, while bitting in water, the venom may be betting diluted and as such a lethal dose may not have been injected. The snake feeds on fishes, frogs and a number of marine fauna. The venom is highly neurotoxic and a good antivenin could save the victim. Recently, this snake venom has been fractionated and some of the fractions have been marketed for therapeutic purposes.

Hydrophis caerulescens (Shaw).—This is another sea snake found on the beaches of Goa. It is bluish grey above and yellowish white below with about 60 broad bands on the body from head to the tail. These bands taper on the lower side. In older snakes these bands become slightly indistinct. It grows to 900 mm. in length and about 65 mm around the girth. The venom is very toxic and only antivenin could save the patient.

Lepemis curtus (Shaw).—This is the third kind of sea snake which has been recovered from the lower regions of Goan territory along the sea. It is light or dark olive above and whitish below with about 50 narrow dark black dorsal bands tapering at the sides. In the adult these are slightly faint. The head is blackish with yellow curved marks on the dorsal surface. It grows to 900 mm. in length and is about 80 mm. in girth. The body is modified for swimming purposes. It lays eggs and like the first sea snake, feeds on fishes, frogs and other marine fauna.

Vipera Russeli (Shaw)—Russel's Viper—This the *mandol* of Goa. People think that there are two kinds of mandol, one being the *aga mondol*. The snake grows to about 4 feet (12,000 mm.) and is about 4 inches in the girth. The head is triangular, with very thin scales. The body is brown in colour with three chains of elliptical marks one over the dorsal and two on the lateral sides of the snake. There

are sometimes white borders to these elliptical marks which are normally grey in colour. This snake prefers deep vegetation and lies curled up with its head in the centre. When approched it makes a deep continuous hiss warning people to keep away. It darts ferociously at the victim taking its fangs out from a sheath and burying them deep in the body. The fangs are nearly one centimetre long and are hollow, thereby the snake injects quite a copious amount of venom. The venom is vasotoxic and it gives very painful reactions at the site of the bite and plenty of swelling which spreads all over the limb apart from oozing at the site of the bite. The venom brings down the clotting level time of the blood of mammals. It is a common sight to see that many patients start bleeding from the nose, gums, kidneys and there is always hæmaturia in patients of this bite. Only an antivenin saves the patient, who dies without the medicine by heart failure. The snake feeds on mammals and frogs and before the monsoon lays young ones directly. It has been noticed that one female Russel's Viper laid 97 young ones continuously for three days. There is quite an amount of cannibalism in the young snakes.

Echis carinatus (Schneider)—Saw scaled Viper—This is the common *phurshen* snake of Goa. It is very common and is found in red soil. It grows to only about 18 inches (4,536 mm.) and can be seen during the rainy season in the soil between stones and many a time near about houses in the farms. It is grey in colour with variagated patterns looking like cross bars on the dorsal sides that run across lateral grey lines at the sides. The head is triangular and it carries a grey arrow headed mark which is the characteristic of this snake. The scales on the side of the body near the neck are serrated and the snake rubs these scales which gives out a continuous hissing sound which can be heard from some distance. It has been seen to strike at a height of 12 inches from the ground. It feeds on insects, scorpions, lizards, small frogs, small mice and even tiny snakes. Often in the stomach of these snakes one could get remnants of insect bodies and flowers which it had visited to eat different insects. The amount of venom injected by this snake being small, the patient does not die immediately but there are side reactions upto 24 hours and the patient may succumb to these secondary causes. He starts bleeding from the nose, gums, kidneys and the complications continue for a number of days. Some putrification also takes place at the site of the bite which is often swollen and shows symptoms of intensive oozing. There is quite an amount of burning pain at the site of the bite. This snake lays a large number of young ones before the monsoons. And they are as poisonous as the adult. A proper antivenin is a sure remedy against the bite of this snake.

Trimeresurus gramineus (Shaw)—Bamboo Pit Viper—This bamboo pit viper along with *Trimeresurus malabaricus* is found in Goa.

It is a green pit viper growing to about 2½ feet (7,500 mm.) in length and 3 inches at the girth. The head is triangular and there is a pit below the nose which is receptive to the temperature of the surroundings. It also hisses now and then. There are white and black spots on the green body. The under surface is grey. It is oftentimes found on trees especially in the region where bamboo is planted. The green colour is deep green like the tree leaves unlike the whip snake which is parrot green. The venom is vasotoxic and the patients can only be saved by a proper antivenin.

* * *

CHAPTER 2—HISTORY

CULTURAL REMAINS OF PRE-HISTORIC AND EARLY PERIOD*

The Gomantak being one of the ancient gateways of India, through its portals have passed many a prince and potentate, merchant and medicant, saint and soldier. The interplay of the cultures brought to Goa across the Sahyadri Mountains in the east and the Arabian Sea in the west, has left an indelible impression on various aspects of cultural development of Goa, through the passage of time. The antiquities and remains throwing light on the cultural development of Goa since pre-historic times such as stone implements and pottery, temples of worship, pieces of sculptures, lithic and copper-plate records of the pious grants by different rulers are scattered all over the territory.

No definite evidence is available as to the period when human habitation came to be spread in this region. Geographically, it has got good water sources and evergreen river valleys, most suitable for the inhabitation of a man.

During their survey of the pre-historic sites in Goa, the officers of the Archaeological Survey of India have found in the valleys of the rivers Zuari and Mandovi and the sea creeks, light stone implements of early stone age, when man was essentially a hunter. Arrowheads, awls, scrappers of quartz found near Dabolim, Arli, etc. throw light on the activities of a man of middle stone age. The tools of the later stone age, when man was a food gatherer consisting of blades, scrapers made of silicious material, were found at Velha Goa, Mopa, Cudne, etc. The polished stone-axes which were used by the first settlers of the land during the Neolithic period was found at Velha Goa. A few rock cut dwellings with entrance hole at the top were discovered on the laterite hill by the sea side at Chicalim on the way to Dabolim. The entrance holes were closed by a slab of black stone. Some pieces of reddish-yelow polished pottery with painted designs in black colour were collected from the bottom of the dwellings. This Neolithic man was a food producer and belonged to the period of about 2000 B. C. The Neolithic culture is succeeded by the iron age.

The iron technology was known during the period of the *Mahabharatta* which centres round the story of Vasudev Krishna. According to Harivamsha Puran which is considered as *Upa-Purana of Mahabharat*, God Krishna is said to have fought a fierce battle with the

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* This section has been contributed by Dr. V. T. Gune, Panaji-Goa.

demon Jarasandha on the mountain *Gomanchal* in which the King of Magadha was totally defeated.[1]

According to the Pauranik traditions, Parashuram the sixth incarnation of God Vishnu is said to have reclaimed the land of the Konkan from the sea and Konkan or Govarashtra is one of its seven divisions.[2] According to another local tradition he is said to have established ten sages in the land reclaimed by him and also performed *Ashvamedha* sacrifice at Arambol (Harmol) in the Pernem taluka.[3] According to another story, God Shiva is said to have deserted his wife and leaving the Himalayas took abode in the Gomantak under the name of Gomantakesha till he was discovered by his wife. It is also said that the Saptarishis or seven great sages performed penance for seven million years and pleased God Shiva so much that he came personally to bless them in the name of *saptakoteshvara.*[4]

Some ruins of Buddhist establishments of the Hinayana sect belonging to pre-Christian Era also are noticed at places like Rivona, Lamgaon and near Priol. According to Buddhist traditional writings of a much later period, the Buddhist monk Punna resident of *Sunaparant*, was mainly responsible for the spread of Buddhism in this region. The Sunaparant is identified to the place *Zambaulim* in Goa. But there is a different of opinion about this amongst the scholars.[5] However, no material remains of Mauryan period are found so far. In 1930, stone image of Buddha in *Dhyanamudra* was discovered by the students of the late Father Heras of the Bombay Historical Research Society at Mushirwada in Colvale (Bardez taluka). It is supposed to belong to the 2nd or 3rd Century A. D. It is about three and a half feet in length and is influenced by Hellenio or Greek art.[6] It may be recalled here that the Buddhist monk Dharmarakshita sent by Emperor Ashoka to the region of Rashtrikas and Bhojas from the Konkan was a Greek convert.[7]

The excavations by the Archaeological Survey of India at Chandor (ancient Chandrapur), situated at 66 kms. from Panaji, in the Salcete taluka, unearthed the earliest brick temple in Goa. The temple was constructed on the remains of a small brick structure of an earlier period. It consists of a *garbhagriha* (sanctum) surrounded by *pradakshinapatha* (circumambulatory passage), a large *sabhamandap*

[1] *Harivamsha Purana*, Contos, 96-99.
[2] Wilson's *Vishnu Purana*, ii, 164 Note 120.
[3] *Sahyadri Khanda* from *Skandha Purana*, pt. II, Ch. I.
[4] *Mangesh Mahatmya* Ch. III.
[5] Varde Valaulicar V. R., *Goyakarachi Goya Bhayali Pasanuka*, p. 9; Naik K. D., *Gomantakachi Sanskritika Ghadana*, p. 43.
[6] JBHS 3. 173-76.
[7] MSG (History), pt. I. p. 191.

(assembly hall) and a medium sized *mukhamandapa or porch*. The temple faces East and measures 16·40 metres (East-West) and 14·10 metres (North-South). Twelve stone bases placed in two rows of 6 each found in the excavation suggest that the roof of the hall was supported by wooden pillars. The hall measuring 7-00 × 12-50 metres was divided into 3 bays, the central one being wider than the side bays. The outer wall of the temple has three off sets, the upper one consisting of excellently moulded bricks. An important feature of this temple is the *mukhamandapa* itself which has two side openings besides the central one and all the three lead to the sabhamandapa. The paved brick flooring on the Southern and Northern flanks of the main structure, clearly indicates an occupation level earlier than the construction of the temple. This evidence corroborates what the Siroda copper-plate grant of the Bhoja King Devaraya suggests. This grant issued from Chandrapura is assigned to the 3rd -4th century A. D.

The ancient town of Chandrapur extended over a large area and was well protected by a mud fortification wall on the North-West and a canal and the river Paroda on the remaining sides. There was also a moat along the fortification. The red-ware pottery of the Satavahana period (200 B. C. to 300 A. D.) was found along the riverside. The trial excavations undertaken so far have confirmed that the town must have been in occupation from the Satavahana times (2nd-3rd century B. C. upto the 11th-12th century A. D.). Earlier this site was partly tapped by Father Heras in 1929 and a small portion of the shrine was exposed and many cultural remains of the late medieval period were discovered. Small pieces of gold coins weighing about 7 grains each were also noticed. They carry lion on one side and the trident symbol on the other. They are discovered every year, due to the inundation of the mound, during the rainy season, by the inhabitants of the place. The cultural remains collection from the site are kept in the St. Xavier's College, Bombay.[1]

The Brahmavatara site at Mapusa where Shantadurga temple was situated was explored by the Archaeological Survey of India in 1970. A tapering cup-like object in red-ware was discovered on the site. It has got some semblance to Roman cups noticed during excavation of Satavahana sites at Karhad and Kolhapur.

The temple of Shri Mahamaya at Nunden (Sanguem taluka) also belongs to this early period. It has got pyramidal type of tower and is constructed of laterite stone. A stone inscription in Brahmi (southern characters), was discovered near the temple and is supposed to belong to the 5th or 6th century A. D.[2]

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[1] JBHS, IV, No. 2, p. 14.
[2] E.I. XXXVII, pt. VI, p. 287.

The rock-cut Brahmanical caves at Arvalem in the Bicholim taluka belong to the 6th, 7th century A. D. They are popularly known as '*Pandavanchya Orya*'. They are excavated on the slope of the laterite hill facing towards the West and overlooking a stream of water running in the valley about 50 feet below. There are three major caves and a residential chamber at the Southern end of the cave. The entire excavation runs continuously and is divided by this rock walls. The central cave consists of triple shrine chamber. The front hall or *Ardhamandapa* is provided with 4 pillars set at almost equal distances. The pillars are simple massive square-sectioned specimens. The portion of the *Ardhamandapa* in front of the central cave is closed by two walls. The ground of the path leading to the *Ardhamandapa* is provided with steps. The central section of each cave is also provided with an entrance in the form of *Chandrashila*. The Northern most cave consists of a square shrine chamber. On its rear part is found a rectangular *pitha* or platform 25 inches high, 36 inches wide and 30 inches deep. The linga is placed within it. It is with a rounded tip and *Parsva* sutras are marked on it. It is made out of granite stone.

The southermost or the third cave is a transverse oblong room of the same dimension as the *Ardhamandapa*. It is well finished and has in the central a laterite platform, *pitha*, on which is found a *linga* shaft. It is cylindrical in shape and is narrowing towards the top. There is no arrangement on the platform of the *linga* for the removal of its holy bath water. Unlike the *linga* at Badami and Aihole, the *linga* is not carved of the same live rock as of the *pitha*.

The northenmost shrine of the central cave of triple shrine, consists of a square chamber and is incompletely finished. It has a square laterite *pitha* in the centre, 42 inches wide and 39 inches on the other side. Its bottom is thus slightly broader. There is a *linga* like shaft in its centre with four mouldings in its visible part. The tubular form of the shaft is tetragonal at its base ; followed by a pentagonal and a rectangular moulding, with a circular disc on the top. The thickness of the shaft is 7 inches. It is thus a block of stone rather than a conventional *linga* by any standard, either canonical or otherwise. There is an inscription in angular Brahmi character on the rectangular part of the shaft which reads, *Sambaluravasi Ravih*. On the paleographical grounds it can be dated to the end of the 6th century A. D. or early part of the 7th century A. D. The name in the inscription refers apparently to the donor i.e. *Ravi* or sun, the resident of *Sambalura*.[1] There is similarity between the name of the donor and the disc mounted upon the shaft and the disc may thus itself represent the sun.

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[1] E.I. XXXVII, pt. VI, p. 283, JBHS IV. 2, p. 4 ; O.P., 2nd Series No. 6,

The central shrine contains a *pitha* 29 inches in height and 45 inches in width. The visible portion of the *linga* shaft at its centre is 40 inches in height. It consists of two moulds. Its cylindrical part on the top is 18 inches and the remaining base is square in size. It recalls the early usage of *linga* shaft consisting only of circular and square sections as at Ellora, Elephanta.

The southern shrine similarly contains a rock-cut *pitha* which is further renovated with structural laterite blocks at a later time in the centre there is a stone shaft similar in form to the other shaft with the inscription, with the exception that its top ends in spearhead with a sharp point. It is thus not in keeping with conventional form of *linga* shaft, but just a stoneshaft. It can be surmised from this that these three lingas displayed in the triple shrine may be symbolic representations of *Saura* or *Sun*, *Shaiva* or *Shiva* and *Kartikeya* or *Kumara* cults, just as in the southern Pandyan caves represent sixfold cults of *Shiva, Vaishnava, Sakta, Kaumara, Saura* and *Ganapatya*, in the form of rock figures sculptures of these divinities in inches. These caves have their own individuality and simplicity. They might have been carved at the direction of Bhojas of Chandrapur or Mauryas of Konkan (6th century A.D.).[1] The stone sculptures of Sun and another one of *Umasahit Alingana Murti* of early Chalukyan form (6th or 7th century A.D.), were discovered in a village Cudnem near the site of the Arvalem caves.[2]

Another temple belonging to the later part of the early Medieval period was discovered at Curdi, 8 kms. from Sanguem. It is situated on a rocky site in a thick forest and has no habitation nearby except the village Curdi which is also beyond the perimeter of the site. It is a shrine of Shiva-worship, a flight of steps from its front leading towards water stream of Tirtha and a small rock-cut cave by its side probably meant for meditation. The cave appears to be Brahmanical and is similar in structure to the one at Arvalem (Bicholim).

The shrine at Curdi is built of laterite and granite stones and is approachable only through heavy wild growth of banyan trees and bamboo groves all around it. The plan of the temple is simple, rectangular. It has got two parts ; the *Garbhagriha* or sanctum sanctorum with a pyramidical tower or *Shikhara* on it and an open entrance pavilion or *Sukhanasi* which is wider than the *garbhagriha*. The exterior walls are made of well-cut laterite stones which are piled up in a vertical position without any cementing in between. The walls are

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[1] Rajan K.S.V., *Cave temple of Arvalem* in *New Era*, Jan. 1966, Panjim.
[2] Pissurlencar P.S.S., *Goa Ha 1500 anos* in *O Oriente Portugues* (2nd series) No. 6 ; Gune V. T., *Ancient Shrines of Goa*, p. 12.

adorned with pilasters and some conical designs in the niches between them. The tower or *Shikhara* is a perfect pyramid marked with horizontal stages that have the appearance of steps and can be compared to early *Viman* or *Shikhara* of the Kadamba style (about 7th, 8th century A.D.). The pavilion is raised on the front side by pillars of granite stone with a ceiling of a pendant lotus design which links it with the doorway to the *garbhagriha*. on the back side. The pillars are supported at the top by capitals and are adorned with circular rings. Some beautiful designs are noticed on them at the griddle. The back portion of the image of *Nandi* is seen in the pavilion. The doorway to the main shrine is also made of granite stone. It is ornamented by beautiful creepers and flower designs, on its two sides. The dedicatory block of the image of Ganesh is seen in the middle of its top. A special panel of some images is further raised on it. From its Shikara and plan of the outlay, the temple seems to be of more than 1,200 years old and might have been constructed when the Shilaharas ruled over Goa (750-1010 A.D.). A broken slab of stone inscription found at the site and written in the Nagari script also supports the period.

Two images of *Umasahit Alingana Murti of God Shiva* were collected from the caves. God Shiva is seen here sitting on his vehicle *Nandi* and embracing his spouse Parvati or Uma, his sons Kartikeya and Ganesh are seen on either side of the panel. The less ornamented image probably belongs to the same period when the temple might have been constructed while the other one seems to be its later imitation during the 12th or 13th century A.D.

The temples of Nagesha and Keshava at Priol, Narayan at Marcaim and Saptakoteshwara at Opa (in the Ponda taluka) follow the same pattern of design and architecture as of Curdi temple and thus belong to the 9th-10th century A.D. In these temples, the *sabhamandap* seems to have been added at a later period and thus *shikhara* also seems to have been remodelled at the same time. The temple of Nagesha at Priol is referred to in the grant of Kadamba King Tribhuvanamalla Vijayarka, dated 1099 A.D. The Goa Kadambas worshipped Shiva as Saptakoteshwara, as their family deity. There was a massive stone structural temple of Saptakoteshwara at Naroa in the island of Diwadi (Tiswadi taluka), which was destroyed during the 14th century after the conquest of Goa by the Muslims. The remains of the *Gopuras* surmounting the decorative pilasters in the niches of the walls of this ancient temple, in Kadamba style with Kalash at the top, are exhibited in the Museum at Old Goa. Similar decorative *Gopuras* are found in the Kamalanarayan temple at Degamve in the Belgaun district, which seems to have been constructed by the end of the 12th century A.D.

at the direction of the Queen Kamaladevi of the Kadamba ruler Shivachitta Permadi.[1] It can be thus concluded that the Goa Kadambas first worshipped God Saptakoteshwar at Opa and with the expansion of their power in the south Konkan, constructed a beautiful massive stone temple of their family deity at Narora during 12th century A.D. Their gold coins also were dedicated to God Saptakoteshwara.

The structural stone temple at Tambdi Surla 65 kms. from Panaji is situated on the bank of a small river and is surrounded by the hills on the south-west and a thick forest all round. It is a Shiva temple and by far the only ancient and best preserved stone structural temple of Goa. The temple facing east is raised on a plainly-moulded plinth and is constituted with a *sabhamandapa* (main hall), *antaralaya* (middle hall) and *garbhagriha* (sanctuary), each following the other and all in the same principal axis. The *sabhamandapa* has three projected entrances facing north, east and south, each approached by a flight of steps in front. In all, there are ten plain pillars on the sides and four well-carved pillars in the central bay of the *sabhamandapa*. It is provided with four *devakoshthas* in the rear walls and *kakshasans* on the sides. The ceiling is made up of large slabs throughout on the side bays and fashioned with *Kapotas* over the entrance and reducing tiers finally covered by a rectangular slab embossed with lotus reliefs over the central bay.

The doorway of the *antaralaya* is flanked by perforated grills and that of *garbhagriha* has *Gajanana* in the *lalatabimba* or the lintel. The exterior walls are throughout plain excepting the portion below the back of the *kakshasanas* which is carved with bold reliefs of rosettes. On the ceiling of the *garbhagriha* rises the *shikhara* with its dilapidated *shukhanasi* in the Dravida style. The niches of the *shikhara* are filled with bas reliefs of superb workmanship, of *Brahma*, *Vishnu*, *Shiva*, *Parvati*, *Kalabhairava* and the *devakoshthas*, with *Mahishasuramardini*, *Naga*, etc. Of them, the *Shiva-Parvati* bas relief is rather interesting as Parvati also is shown to have worn *kiritamukuta*, an unusual feature in the region and both are seated on their *vahana* i.e. *Nandi*. Another curious bas relief, probably of some significance, is an "elephant trampling a horse".

The ground plan *padavinyasa*, the style of the pillars and *shikhara* the elaborate and minute ornamental carvings, the proportionate and graceful delineation of the physical features of the bas reliefs and other decorative motifs have a close resemblance to those of the medieval temples of the western Chalukyas of Kalyani and their

[1] JBBRAS, IX, p. 275; Moraes G.M., *Kadamba Kula*, p. 312

successors, the Yadavas of Devagiri. The Goa Kadambas were the feudatories of the western Chalukyas of Kalyani and the Yadavas for some time. The temple may, therefore, be dated to the 12th-13 century A.D.

The temple of Saptakoteshwar at Naroa was reconstructed by Madhava, the Minister of Vijaynagar by the end of the 14th century. The remains of the *garbhagriha* or main sanctum are still noticed on its site, which is now transformed by the Portuguese into a Chapel of Candelaria. While reconstructing the temple, the ancient Kadamba *Shikhara* of the temple seems to have been replaced during the Vijayanagar period by a simple dome with a small tower on its top. A new temple of the ancient God Saptakoteshwar was again constructed in a village Naroa in the Bicholim taluka by Shivaji, the founder of the Maratha empire in 1668 A.D. It has maintained the structural form of the *Shikhara* adopted by Madhava, the Minister. In fact, the ancient architectural design of the Vijayanagar *Shikhara as* evolved in Goa seems to have been adopted during the 16th century while constructing the temple of God Mangesh at Priol and Goddess Shantadurga at Queula.

There are beautiful panels of wood carvings depicting *Dashavataras* and Pauranika stories in many of these temples which go back to the 15th-16th century A.D. The wood carvings in Narasinha temple at Velinga, Mahalasa temple at mardol may be specially referred to here. The Mahalakshmi temple at Bandiwadi has got a gallery of 18 wooden images *vyuha* or emanatory aspect of Bhagavat sect. It is considered as one of the rare galleries of wooden images of Vishnu in India.[1] There are ancient wall paintings depicting Pauranik stories in the Bhagavati temple at Pernem (Bicholim) which belong to the 16th century.

The remains of the sculptures of Gajalakshmi, Saptamatrikas, Ganesh, Narayan, Mahishasuramardini, Kartikeya, Brahamadeva Saraswati, Mahalakshmi, etc. extending over a period of about 1,500 years, are scattered all over the territory. There are also hero stones or *Veeragalas* showing naval battles, war scenes wherein cavalry and elephants are used. Ancient sculptural remains of lion who is considered as the vehicle of the Goddess Durga, and who was also adopted as the royal emblem by the Kadambas of Goa are also noticed at many places.[2] A large number of *Sati-stones* in different designs are also noticed in many places.

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[1] Gune, op. cit. p. 10.

[2] Gune, op. cit., pp. 18, 19; *New Era*, May 1966, etc.

ANCIENT RULERS OF GOA (c., 3rd cen. to 1300 A.D.)*

Bhojas of Chandrapur

The ancient history of Goa can be traced from Mauryan times before the Christian Era. The Girnar rock-cut edicts of the great Mauryan Emperor Ashok of Pataliputra refers to the people known as Peitinikas, Rashtrikas and Bhojas, who had already settled down in the semi-independent kingdoms on the southern border of the empire comprising the Deccan and the Konkan Coast.[1] It is also known from his 13th Edict that the Bhojas and Peitinikas were following his instructions of morality.[2] We have got six copper-plate inscriptions of the Bhojas of the south Konkan extending over the period from the 4th to the 7th century A. D. No. records of the Bhojas belonging to the early Mauryan period are so far discovered. The earliest known record of the Bhoja ruler of Goa was found at Siroda, 41. kms. from Panaji. On the paleographical grounds it is supposed to belong to the 3rd or the 4th century A.D. It was issued from Chandrapur, modern Chandor from the Salcete taluka, which is situated on the bank of the river Paroda, south of Goa.[3] Thus King Devaraj of Siroda plate is the first known ruler of the Bhoja dynasty of Chandrapur. It records a grant of some tolls from the village *Thanniyarka-Kottihakayya* to two Brahmins Govindswami and Indraswami of Bhardwaj Gotra, along with house site and pasture land for cows. It was composed by *Rahasya Adhikari* or private secretary of the King, *Prabhakara*. The place referred to in the inscription may be identified with the village Thana Cortalim (Salcete taluka). It is written in southern Brahmi. The royal emblem of elephant is seen on the seal.

We have got two grants of the king Bhoja Prithivimallavarman which were found at Bandora (Bandiwadi) Ponda taluka 34 kms. from Panaji. The first one belongs to the 1st regnal year of the king and the 13th day of the bright half of the mongh of *Jyeshtha*. It is issued from *Vrishabhimi-Kheta*. This place is not identified. It refers to a grant of field surrounded by blue hills from a village *Bhagala-pallika* from *Kupalapa-Kataharadesh* to a brahmin *Madhavarya* of Agniveshya Gotra. The grant was made for the merit of the king's mother *Chetasadevi* at the request of his brother Satrudamana. These persons are not known from any other source. *Chetasadevi* is described as *Nellikabalika*. Another grant of *Prithivimallavarman*, was issued from the victorious *Prithiviparavato*. This place may be

* This section has been contributed by Dr. V. T. Gune, Panaji, Goa.

[1] B. L. I, pt. ii, p. 143.

[2] *Ashoka's Inscriptions* C.I.I. Vol. I, p. 46.

[3] Pissurlecar op. cit., 6, p. 392-99; E. I. XXIV p. 143; *ibid.*, XXVI p. 337; E.I. XXXIII, p. 61.

identified with the village *Parvat* near Chandor. It is dated *Shravana Sukla* 15 of the 25th regnal year of the King. It is addressed to the present and the future *Bhogikas, Ayuktas* and *Sthaynis*. It records a grant of a field named *Kapoli Khajjana* situated in the village Malar, included in *Kupalakatadesha*, to a brahmin *Damarya* of the Bhardwaja Gotra, who is also called *Agniveshya*. It was written by *Buddhadasa* of the Kamboja Gotra and was executed by *Nidhivara*. The locality of Malar may be identified with the Malar village from Diwadi island. Tiswadi taluka. The characters of the above two records are hook-headed and they definitely belong to the later period than the grant of Siroda plate of Devaraj and may be dated to the later half of the 5th century A.D.[1]

Another copper-plate record of the Bhoja dynasty was discovered at the village *Hire Gutti* in Kumta taluka of North Kanara district ; adjoining Goa. It registers the grant made by King *Asankitaraja* of the Bhoja lineage to a Buddhist Vihar in the village *Sundarika* in the *Dipaka Vishaya*. It bears a seal depicting the figure of an elephant, the emblem of the royal family. The gift was entrusted to the Arya Sangha. It was bounded by Kuravva in the east, the roaring stream of Martiakaltu in the south and the waterfall on the mountain in the west. The alphabets of the plate betrays archaic traits and on paleographical grounds it may be ascribed to the end of the 5th century or the beginning of the 6th century A.D.[2] The place name Dipaka Vishaya seems to have been derived from *Dvipa* or an island and may be thus identified to Anjidiv near Karwar on the island of Divar, north of Goa.

The copper-plate inscriptions discovered at village Kopoli in Khanapur taluka of Belgaon district on the border of Goa mentions the King Asankitavarman of the Bhoja lineage The three plates are strung in a ring which bears the seal of an elephant. It is issued in the 5th regnal year of the king, the full moon day of the month of *Jyeshtha*. It records a grant made by the chief *Elakella* of the *Kaikeya* lineage, at the instance of the king, of a valley *Vamshavatika* from *Solundaraka* seventy from *Palasika Vishaya*, to a Brahmin Nagasharman of the Harita Gotra. The king is described as *Maharaja*. The grant is written by Madhava, the son of Govinda *Bhogika* and the king himself is its executor. The division Solundaraka Seventy is not traced. However, it might have been included in areas of the Khanapur and Halyal talukas on the border of Goa. Palasika Vishaya is the same as Palastige-12000 of the later epigraphs of Goa Kadambas and Palasika or Halsi was its main town.[3] The Kaikeya lineage to whom

[1] E.I XXXIII pp. 61-65.
[2] E.I. XXVIII, pp. 70-74.
[3] E.I. XXXI, p. 234 ff.

Elakella, the donor of the grant belonged is known from other records. The Halmidi inscription of Kadamba Kakutsavarman describes the fight between the Kekeyas, Kadambas and Pallawas.[1] The King, Kadamba Krishna Varman married a Kaikeya princess.[2] Prabhavati, queen of Kadamba Mrigeshavarman and mother of Ravivarman of Halshi belonged to Kaikeya family.[3]

Yet another copperplate inscription of the Bhoja dynasty was discovered at village Arge near Karwar on the southern border of Goa. It is issued by the King Kapalivarman from his camp at *Pansa-Kheteka* and records his grant of land *Pukkoli-khajjana* belonging to *Adityasresthi* from the village *Sivapuraka* to *Swamikaraja* for religious purpose as requested by him to the king. Swamikaraja in his turn has made over the same land to a brahmin Bhavarya of *Kaundivya* gotra with libation of water so that merit might accrue to him. The executor of the charter is named as Nandaka-talavara and it was written by Krishna bhoyaka. The king Kapalivarman is described as *Dharmamaharaja* and appears to have been a ruler of dignified status. This title was assumed by many princes of early Pallava, Kadamba and Western Ganga families. It is possible that Kapalivarman might have come in clash with the Kadamba princes of Banawasi who were trying to establish themselves at Palasika or Halshi and after their defeat assumed himself the title *Dharmamaharaja*. The Kadamba king Ravivarma seems to have established in the Palasika Vishaya of the Bhojas during the early part of the 6th century A.D.[4] The inscription in southern Brahmi script and the letters are box-headed and resemble to some extent those of Kudgere plate of Kadamba Mandhatrivarman of Banavasi (490-497 A.D.) and may be dated to the early part of the 6th century A.D. Pansakhetaka village may be identified with Palasika or Halshi from Khanapur taluka of the Belgaun district.[5] It may be surmised that the Swamikaraja of the plates is the same as the chalukya chief Swamiraja who was victorious in eighteen battles and was killed by the early chalukya king Mangalesha as described in his Nerur plates.[6] He might have also helped the Bhojas in their fight with the early Kadambas of Banawasi who were trying to establish themselves in Palasika Vishaya of the Bhojas. The above described six grants of the Bhoja rulers have disclosed the names of the Bhoja king *Devaraya*, *Ashankit*, *Ashankitavarman*, *Prithivimallavarman*, and *Kapolivarman*, *Chetasadevi*, the queen of *Prithivimallavarman* and *Satrudamana*, the latter's brother.

[1] MAR 1936, pp. 72 ff.
[2] E.I. VI, p. 18.
[3] MAR 1910-11, p. 35.
[4] B.G. I, pt. ii, p. 288.
[5] E.I. XXXI, p. 232.
[6] I.A. VII, p. 161.

They belonged to the period from the 4th to the 7th century A.D. The relationship in which the five rulers of the family stood to one another and the order of their succession, if any, is not clear from these records. We do not know also how the Goa Bhojas were related to the Bhoja princes mentioned in the inscription found at Bhedsa, Kanheri and Kuda from the North Konkan and who were responsible for the excavation of the caves in these localities. These grants were issued from different places, *Chandrapur, Vrishibhimikheta, Prithviparvata, Pansakhetaka* and *Dipakavishaya*. Chandrapur and Prithiviparvat have been identified with Chandor and Parvat village near Chandranath hill from the Goa territory. The place *Dipaka* may also be identified with Diwadi island of Goa and Pansakhetaka with Halshi from Khanapur taluka, Belgaon district. Thus the Bhoja rulers of Chandrapur or Chandramandala seem to have held sway on the west coast area comprising present Goa territory and adjacent parts of North Kanara and Belgaun districts towards the east of Goa.

The Satavahanas of the Deccan claimed their descent from the sage Hariti and belonged to the gotra or clan of *Manavyasa*. The early Kadambas of Halshi also claimed the same family tradition. The similar legendary origin of the Bhojas is not stated in any of their records. According to Pauranik tradition, the Bhojas belonged to the sub-division of Yadavas of the Aryan race of Kaikeyas and seemed to have settled down to the Konkan or Aparant by the time of the great emperor Ashoka of the Maurya dynasty (3rd century B. C.). In the post Vedic sanskrit literature and the epics, the Bhojas figure as a clan of rulers[1]. According to *Aitareya Brahmana*, the chiefs of the Satavat clan were named as Bhojas and they were governed by the tribal constitution known as *Bhauiya constitution* in which the authority was vested in the chosen representatives or leaders of the people.[2] With the passage of time the selected leaders seem to have become hereditary rulers.[3]

At present there is among the Cristians of Chandor, a sub-caste known as *charddo* Christians who claim themselves to belong to the original Kshatriya community of ancient Chandrapur. It is customary to have a peculiar dance known as dance of *Musala* (pounding stick made of wood), which is held in a certain month of the year. It is this *musala* (wooden pounding stick) which destroyed the Yadava clan according to the Puranic traditions. This customary dance followed by the Christians of Chandor also establishes that the Bhojas of Chandor originally belonged to the Yadavas of Mahabharata. It is

[1]Jayaswal, *Hindu Polity* (Second Edition), pp. 66 and 79.
2. *Aitereya Brahman*, VIII, p. 14.
[3]Hindu Polity, p. 79.

clear from the records described above that the Bhojas adhered to the Brahmanical religion and made grants to the learned Brahmanas for their merit. It is only *Ashantikuraj Bhoja*, ruler, who made a grant to the *Aryasangha* for the maintenance of the Buddhist Vihar in the Dipika Vishaya. It seems the Bhojas had a well-organised administrative machinery for conducting the affairs of their Government. We find references to the Officers *Bhogika Amatya* (Minister for Revenue and Finances), *Sarvatamtradhikari* (Chief Administrator) and *Rahasyadhikari* (Private Secretary), who maintained the king's household. All their records are written in Sanskrit language and at the end, the name of the executor of the grant is also noted. They seem to have taken interest in the development of agriculture and issued grants of marshy lands by the seaside (khajjana) to the brahmins and others for their development. Some of their records also mention the taxes levied by them on the river navigation.

Satavahanas

The Satavahana dynasty was ruling supreme in the Deccan (Dakshinapatha) and south of India about the 2nd century B.C. while the north was dominated by the *Kushanas*, who came into prominence about the 1st century A.D. Krishna Satakarni, the brother of the founder of the dynasty *Simurka Satakarni* seems to have annexed Konkan including the territories of the Bhojas of Chandrapur by the end of the 2nd century B.C. He was also known as Mallakarna. The village Mallakarna near Chandor is also of great antiquity and might have been named after him. It had got a number of ancient remains near the Shiva temple.[1] The Bhojas who were ruling in the Konkan had matrimonial relations with their families and thus continued to rule in the Chandramandal as their feudatories.[2] We have not found any records of the Bhojas so far in the coastal districts of Goa viz. Salcete, Tiswadi and Bardez and this tract might have been administered directly by the Satavahanas through their viceroys. The foreign ships were escorted by them to Broach which was under the Kshatrapas and because of this Periplus seems to have classified ports from the South Konkan as of pirates. Chandrapur region was subjected to the Satavahana branch of Kolhapur which is identified with Ptolemy's Hippakora. The peninsula of Chandramandal in the neighbourhood of Goa was probably known during Ptolemy's times (1st century A.D.) as Khersonesoa. Goa has been described by him as Kowa.[3]

Under the Satavahanas, Kolhapur was the capital of this part of Konkan. Late Rev. H. Heras had observed about the antiquities of

[1] MSG (History), pt. I, pp. 79-81.
[2] *Ibid.*, p. 63.
[3] Mc Crinde, J. W., *Ancient India by Ptolemy*, p. 47.

the city of Chandrapur, that by digging 15 feet in any place of the fort walls, one finds old bricks, pottery and small pieces of iron. During the rainy season small pieces of gold are easily discovered.[1] The bricks and tiles belong to Satavahana period. These archaeological finds give us an idea of the ancient commercial glory of this city of the Bhojas. With the fall of the Satavahanas in the 4th century A.D., this lucrative seaborne trade also seems to have declined. From the beginning of the 6th century, the Persians interrupted the Indo-roman trade, which was later on revived under the Badami Chalukyas during the 7th Century.

The statues of Simuka and Krishna Satavahana at the pass of Naneghat near Mahad bear testimony to their maritime adventures, which also laid down foundations of the Indian colonisation in the farther India. The ancient traditions of the Bhojas about navigation and shipping are recorded in the Sanskrit manuscript *Yuktikalpataru*. In A.D. 673, the Chinese traveller I. Tsing noticed Indian colonies of Shri Bhojas in Sumatra, Kalingas in Java, and Bhojasparas in Bali. It seems in some cases the emigrants named their colonies after the place names from where they migrated from the west coast such as Bali, Banda, Sunda, Gowa, etc. As late as 17th century, there was in the island Macassar, a kingdom by name Gowa, ruled by a sultan with whom the Portuguese in Goa had trade relations.[2]

Kshatrapas and Abhiras

The Satavahanas of the Deccan were the rivals of the Kushanas of the north. The Kshatrapas considered themselves as the feudatories of the Kushanas. The Satavahanas had to fight with the western Kshatrapas and the *Kshatrapa Nahapana* who had held sway over Gujarath, Konkan and Northern Maharashtra was defeated by *Gautamiputra Satakarni* about 110 A.D.[3] The coins of Shri *Satakarni* and *Pulumavi* are reported to have been found in the coastal areas of Goa. It seems from his Junagad records that Kshatrapa Rudradamana held Konkan by about 150 A.D.[4] His capital was at Ujjain. After the fall of the Satavahana by the end of the 2nd century A.D., the Abhiras seem to have established themselves in their territory during the early part of the 3rd century A.D. The Abhir King *Ishvarasena* seems to have conquered the Satavahana territories in the Konkan and Western Maharashtra. He founded an era which continued in use for over thousand years and became known later on as *Kalachuri* or

[1] JBHS IV. 2.

[2] Goa Archives, Monces No. 268, p. 367; Boxer C.R., *F. V. de Figueiredo, a Portuguese Merchant--Adventurer*, pp. 3, 5, 27, 71 N. etc.

[3] MSG (History) part I, pp. 92, 154.

[4] *Ibid.*, p. 157.

Chedi Samvat. It was started in A.D. 249-50. According to this Era, New Year began on *Kartika Sukla Pratipada*.[1]

Traikutakas of Konkan

After the fall of the Satavahanas, the *traikutakas* established themselves in the Konkan as feudatories of the Abhiras. From their inscriptions and coins three names of the Traikutaka rulers are available. *Indradatta*, Maharaja *Dahrasena* (K. 207 i.e. A.D. 456-57), Maharaja *Vyaghrasena* (K. 241 i.e. A.D. 490-91). We learn from his copperplate found at *Pardi* in Surat district of Gujarath that the king Dahrasena performed *Ashvamedha* sacrifice and thus seems to have declared himself independent after the fall of his overlord *Abhiras*. He styled himself as *Parama-Vaishnava*. In the inscription he is described as *Bhagavatpada-Karmakara*. His empire comprised southern Gujarath, Konkan and northern Maharashtra.[2] His son Vyaghrasena ruled over Konkan during A.D. 465-492.[3]

Kalachuris

The *Kalachuris of Mahishmati* near Indore succeeded the Abhiras by 416 A.D. and extended their dominion over northern Maharashtra and Konkan by the middle of the 6th century A.D. The Khandesh was their main stronghold. The silver coins of Krishnaraj are found in Konkan and the Deccan The coins of *Krishnaraja Kalachuri* found in Konkan and Deccan, describe him as *Parama-Maheshvara-Matapitr-padanudhyata-Krishnaraj*, which means, illustrious Krishnaraja, who meditates at the feet of his mother and father and is devout worshipper of God *Maheshvara*. It is reported that his copper coins were also discovered in the Konkan. Krishnaraja was succeeded by his son Shankaragana (A.D. 575-600). He was succeeded by his son *Budharaja* who was completely routed out by the King *Mangales* of Chalukyas of Badami.

Mauryas of Konkan

The Mauryas were placed in charge of *Aparant-Konkan* by the *Kalachuris*. There are two copper plate grants of the Maurya kings found in the Goa territory —(i) Shivapur plates of Chandravarman and (ii) Bandora plates of Amirjitvarman. On the paleographical ground they are dated 6th and 7th century A.D. The records refer only to the ruling king and therefore their relation to one another is not known.

The king Chandravarman is described as "*Nana-samasta-manu-marichibhir-acharita-padapadma*" i.e. whose lotus-like feet were

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1 MSG (History) pt. I, p. 103.
2 C.I.I. Vol. IV, inscription No. 8.
3 *ibid*, No. 9.

sprinkled by the rays of the sun in the form of many feudatory chieftains. The grant records the donation of some land to the *Maha-Vihara* i.e. *monastery,* situated in Shivapur, the boundaries of which have been specified in the chaiter. It is not known from where the grant was issued as the first part of the plate is damaged. Shivapur is identified with Siroda from Goa.[1]

The Bandora (Bandiwade) plates from Goa were issued by Maurya Maharaja Anirjitavarman from Kumardvipa i.e. modern Cumbarjua found in the Tiswadi Taluka. It is addressed to the inhabitants of twelve village-desh as well as the present and future officials. The record registers the king's grant of one *hala* of *khajjana* land as well as a piece of land, including a house-site, a garden and a tank belonging to an unnamed Rashtrakuta, to a brahmin Hastarya of *Hariti gotra.* He is described as *ukta-niyoga* and *grihita sahasra.* The expression seems to have been used to indicate his learning of *Samaveda,* which is supposed to have a thousand branches. In addition to this, some land to be reclaimed by clearing the forest, *aranga-karshana,* and by employing four batches of workers *preshya-kula* was also granted. The gift was made for securing the final bliss and merit for the king as well as of *Nagapadda, Malladatta* and *Achala.* The gift was exempted from all taxes i.e. *panga.*

The doree Hastyarya, was to enjoy the produce of the land by putting up a bund to prevent the salt water from entering the field on the seashore.

The executor of the grant was the king himself. It is dated as the tenth day of the seventh fortnight of *Hema,* i.e. *Hemanta* in the twenty-ninth year apparently of the king's reign. This year 29 is expressed by the numerical symbols for 20 and 9.

Except Chandravarman and Anirjitavarman, no other king of this Maurya dynasty ruling over south Konkan during the 6th, 7th century is known. We learn from Aihole inscription of Pulakesin-II dated in 634 A.D., that the king's father Kirtivarman had expelled the Mauryas who were ruling in the south Konkan by 578 A.D. The king Mangalesa uprooted them from the north Konkan also by the latter half of the early part of the seventh century A.D. The early western Chalukyas records do not refer in any way to the defeat of the Bhojas of Konkan. However, there are no records of the Bhojas throwing light on their history of this period.[2]

Early Chalukyas of Badami (540-757 A.D.)

We have got eight copperplate grants of the Chalukya emperors of Badami who are also known as Western Chalukyas, extending

[1] NIA, 4.181 ; An. Bh. Or. Res. Inst. XXIII, pp. 510-13.
[2] E.I. XXXIII, pp. 293-94.

over about 200 years period from 578 A.D. to 750 A.D. Some of them are dated in well-known Saka Samvat and thus with the Chalukyas of Badami we enter into a more definite period of ancient history of Goa. One of these records of the beginning of the reign of the great emperor Pulakeshi II is reported to have been found in Goa itself and is dated 610 A.D.[1] and the other seven records are found at Nerur near *Kudal* in Sawantwadi (Ratnagiri district), on the Northern border of Goa. The earliest of them is issued by the prince Mangalesha during the regime of Emperor *Kirtivarman*, dated about Saka 500 and A.D. 578.[2] It refers to the grant of village Kundiwataka from the *Konkana Vishaya*, which is identified with the village Cudnem from the Bicholim taluka of Goa and which has also got the cultural remains of the same period.[3] The grant referred to in Goa plate is issued by their Viceroy *Satyashraya Druvaraja Indravarman* (Saka 532 current, A.D. about 610), from *Revatidvipa*, which place has been identified with the village Redi from Vengurla (Ratnagiri). It is situated just on the northern border of the present Goa territory. It is further learnt from the grant that he was governing over four *Vishayas* and some *Mandalas* from his headquarters at *Revatidvipa*.

The Nerur grant of Emperor Vijayaditya (705 A.D.) describes this province as *Mahasaptama* and also *Iridigeveshaya*. The Kannada equivalent of Rewati is *Iridige*. Mahasaptama is one of the 7 Konkanas, which is often referred to as Konkana Vishaya in contemporary inscriptions. Thus the present territory of Goa seems to have comprised of the province of *Revatidvipa or Iridige* or Konkan Vishaya of the Chalukyas of the Badami. The Goa plate which refers to *Rewatidvipa* is reported to have been discovered in Goa itself and thus it may be identified with Gowadwipa also. The north Konkan is referred to as *Puri Konkan* 1400 in the grants of the early Chalukyas, and thus another appellation of Rewatidvipa Konkan 900 referred to in the grants of Shilaharas and Kadambas of later period might have been originated during the Chalukyas administration.[4]

According to the preambles to the grants in their records referred to above, the Chalukyas said to be the princes who belonged to the *Manavya Gotra*, were *Haritiputras* or descendants of *Harita*, nourished by *Saptamatrikas* or seven mothers, acquired uninterrupted prosperity through the protection of God *Kartikeya*, obtained through the favour of God *Narayana*, *Varahalanchana* the boar crest even at the sight of which all enemies were subjugated. The banner of the Chalukyas is known as *Palidhvaja* or flag consisting of rows of flags.

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[1] JBBRAS X. p. 348; I.A. XIX, p. 11.
[2] I.A. VII, p. 162.
[3] O.P., 2nd Series No. 6; Gune, *op.cit.*, p. 16.
[4] JBBRAS, XXV, p. 225.

Their name is spelt as *Chalukyas*, *Chalikyas* or *Chalkyas*. The Brahma was born from the lotus of God Vishnu's navel. His son was *Hariti Panchashika* from whose *Chulak* or hollow of the palm the Chalukyas were born, when he was offering water of ablution to Gods.[1]

The earliest reference to the name *Chaliki* is found in the inscription of Ikshvaku family at *Nagarjunakonda*, dated 3rd century A.D. in the personal name *Khanda-Chalki-Remmanaka*, who is described in it as *Mahasenapati* and *Mahatalavara*. The next reference is noticed in the *Badami* inscription of *Pulakeshi I, Vallabheshvara* who has described himself a Chaliky.[2] However in traditional genealogies he is preceded by *Ranaraga* and his father, the founder of the family *Jayasinha*. Our records state that *Pulakeshi I* performed *Ashvamedha* sacrifice which signifies that he was a paramount ruler. He is thus the first prince of the family. It is further stated that he was conversant with the code of laws of *Manu*, and *Ramayana* and *Mahabharat*. He was equal to Brihaspati in polity. He is also said to have performed in addition to *Ashvamedha, Agnishtoma, Vajapeya* and *Paundrika* sacrifices. Thus he was the favourite of the world (Vallabha)[3]. The Badami inscription states that he fortified his capital of Vatapi (Badami), Saka 465, A.D. 543. He married princess Durlabhadevi of the Batapura family. He had two sons Kirtivarman and Mangalesha. Durlabhadevi seems to have been the stepmother of Mangalesha.[4]

Kirtivarman (A.D. 566-98) succeeded his father Pulakeshi I about A.D. 566-67.[5] According to his own inscription he destroyed his *dayadas* or rival kinsmen by displomacy and prowess and ruled over his subjects according to the Codes of conduct of different castes and religious sects.[6] According to Nerur grant of Vijayaditya (700 A.D.), he established his fame in the territories of the hostile kings of *Banavasi* and other cities.[7] In the Aihole inscription he is described as the night of the destruction to the Nolas, Mauryas and Kadambas.[8] we have already seen before that the Maurya King Anirjitvarman of Bandora copper plate was ruling in south Konkan from *Kumardwipa* during the 6th century A.D. who must have been thus defeated and subdued by Kirtivarman, and his territories in Konkan were assigned to the feudatory *Swamiraja* of the Chalukya family whose headquarters was *Rewatidwipa*. Swamiraja seems to have helped pulakeshi I as well as Kirtivarman in the building up of the Chalukyan empire, as

[1] B.G. I, pt. ii, p. 339.
[2] E.I. XXVII, p. 8.
[3] The Nerur grant of Mangalesha I.A. VII, p. 162.
[4] Mahakuta Inscription I.A. XIX, pp. 17, 18.
[5] I.A. III, p. 305.
[6] E.I. XXVIII, p. 62.
[7] I.A. IX, p. 125.
[8] E.I. VI, p. 1 ff.

he is said to have been victorious in eighteen battles. He appears to be the same Swamiraja who is referred to in the Arga plates of Bhoja King Kapalivarman who was ruling in the Chandramandal of Goa during the early part of the 6th century A.D.[1] It seems the Bhojas of Chandrapur were not disturbed by their Chalukya Viceroys of *Rewatidwipa*. Kirtivarman was thus the first King of the dynasty who had established his sway over South Konkan and Goa. He was great patron of art. He attempted at adopting the Buddhist rock-cut temple architecture to Hindu shrines. His own stone inscription from the Vaishnava caves at Badami records that, his brother Mangalesha, executed the work of the Vishnu Temple under the directions of Kirtivarman.[2] We learn from the *Chipluna* copper plate of Pulakeshi II that Senanandraja of the Sendraka family was his maternal uncle and the wife of Kirtivarman must be thus from the Sandraka family. Senanandraja was placed in charge of *Avaritika Vishaya* near *Chiplun*.[3] Kirtivarman died in A.D. 597-98. He had two sons, Pulakeshi and Vishnuvardhana. But they were quite young. His step-brother Mangalesha thus succeeded him on the throne. He is referred to in the records as *Mangalaraja, Mangaleshvara, Mangilesha, Mangalesha.*

Mangalesha (A.D. 597-610) had the birudas or titles of *Ranavikranta* or the valorous in war; *uru-ranavikranta* or valorous in war as *Uru*; and the epithet of *Shri Prithviyallabha* or Chief of favourite of fortune and the earth and is described as *Parambhagavata* or most devout worshipper of the Divine one, *Vishnu*. The important events of his reign as mentioned in his undated grant of Nerur are that he had driven out the King Buddha who was the son of *Samkaragana*, who was also possessed of power of elephants, horses and foot soldiers (*Gajaturagapadati*) and that he had slain Swamiraja, who was born in the family of Chalukyas and who had been victorious in eighteen battles.[4] Mahakuta record shows that the victory over Buddha by which Mangalesha acquired the whole of the northern territory upto the river Kim and even upto Mahi took place before A.D. 602.[5] Aihole inscription records another event of his achievement as the conquest of *Revatidwipa*. The stronghold which was attacked for the reduction of Revatidwipa was evidently situated on the coast for the same inscription states—Mangalesha's army when it had beset the rampart was reflected in the water of the great sea as if it were the army of the Varuna (the God of Ocean) which had come

[1] E.I. XXXI, p 232.
[2] I.A. III, p. 305, *ibid.* VI, p. 368; *ibid. X*, p. 57.
[3] E.I. III, p. 51.
[4] I.A. VII, p. 161.
[5] I.A. XIX, pp. 17, 18.

at its command. The fortified promontory is identified with the modern Redi eight miles from Vengurla (Ratnagiri).[1] This description throws light on the war which must have been fought between Swamiraja and Mangalesha. Swamiraja seems to have aided the Kalachuri King Buddharaja and revolted just when Mangalesha invaded his territory. Mangalesha had therefore to abandon his original plan of conquest of the North India and raising pillar on the bank of Bhagirathi. He rushed to Revati to punish Swamiraja whom he slew as stated in undated grant of Nerur.[2] Mangalesha then placed *Satyashraya Dhruvaraja Indravarman* of the Batpura family who was related to his own mother as governor of 4 veshayas and Mandalas of Revatidwipa.[3]

The important events of the regime of Mangalesha described in the undated Nerur grant are also narrated in the Mahakuta pillar inscription of Mangalesha which was set up immediately after those events. It is dated as A.D. 601-02[4]. The undated Nerur grant was approximately dated by Fleet as Saka 500 or A. D. 578. Now it may be dated as A. D. 601-02.[5] It records that *Mangalaraja* granted the village of *Kundivataka* from *Konkana Vishaya* to a Brahmin *Priyaswami*, son of *Sumatiswami* of *Kashyapa Gotra*. The Kundivataka has been differently identified with the village Kundi. in Sangameshwar and Kudal in Sawantwadi Talukas of Ratnagiri District. But it can be better identified with Cudnem in Bicholim taluka of Goa, which has got cultural remains of early Chalukyan period.

The Goa plate of *Satyashraya Dhruvaraja Indravarman* records the grant of the village *Karillika* in *Khetaharadesha* to a Brahmin. The *Khetaharadesha* is identified with Kheda Taluka of Ratnagiri District. *Karillika* may be identified with some village near about Kareli Creek in Vengurla Taluka. The grant was made on the full moon day of *Magha-Saka-Samvat* 532 corresponding to 15th January A. D. 610 to the 5th January A. D. 611, according to the saka year is applied as current or expired.[6] It refers to the twentieth regnal year of *Indravarman*, which is equivalent to A. D. 590, in the reign of *Kirtivarman I*, for the commencement of his government.

Mangalesha who had high ambitions of extending his empire to the river Bhagirathi in the North and of erecting the pillar of success there, had to remain contented by setting up *Dharmashthembha* at *Mahakuta* (A. D. 601-02). His reign ended in disaster. He lost his life in the

[1] B. G. I, pt. ii, p. 347 n-2.
[2] I.A. VII, p. 161.
[3] Goa plate, JBBRAS X p. 348; I.A. XIX, pp. 11, 12.
[4] I.A. XIX, p. 745.
[5] *ibid*. VII, p. 161.
[6] B.G., I, pt. ii, p. 355.

Civil war with his nephew *Pulakeshi II*, for securing the throne for his beloved son, ignoring the lawful claims of the latter, as is learnt from Pulakeshi's Aihole inscription. The son of Mangalesha whose name is not recorded in Aihole inscription is supposed to be *Satyashraya Dhruvaraja Indravarman* of Goa plates. He had the title of an "ornament of the original great *Bappura* (*Batapura*) lineage". But it can be explained that the wife of Pulakeshi who was his mother belonged to the Batapura princes. Pulakeshi's first regnal year correspondents with Saka 532, expired, while the date of Goa grant is saka 532, current or expired, and the epithets of his overlord i.e. *Maharaja, Shri Prithvivallabha* can also be identified with Mangalesha The victory of Chalukyas reached its zenith in the reign of Pulakeshi II who succeeded Mangalesha in the month of October in A.D. 610.

Pulakeshi II (A.D. 610-11 to A.D. 642) had the titles of *Satyashraya Shri Prithvivallabha Maharaja*.[1] We learn from Aihole inscriptions[2] that he attacked Puri, the capital of the Konkan Mauryas from North Konkan by hundreds of ships, defeated the Mauryas and annexed the North Konkan to his empire. Their capital Puri has been described as 'the fortune of the Western ocean' and is identified variously with Elephanta near Bombay, Rajapuri in Kolaba or Rajapur in Ratnagiri district. The *Latas the Malawas* and the *Gurjaras* voluntarily submitted to him and became his feudatories. The authority of Pulakeshi was thus extended upto the river Malvi. *Harshavardhana*, the lord of the Northern India (*Uttarapath*) was at the same time trying to extend his dominion over the Deccan (*Dakshinapatha*). The forces of these two mightly rulers met near the river Rawa from the Vindhya mountains. Pulakeshi inflicted a crushing defeat on the great *Harsha*, destroying his army consisting of innumerable elephants. This great achievement of Pulakeshi is described by his successors in their records which state that Pulakeshi acquired the title of '*Parameshwara*' or Lord Paramount, after defeating Harshavardhana the lord of *Uttarapath*[3] From the Hyderabad copperplate inscription this event seems to have taken place some time in A.D. 613.[4]

As stated in the Aihole inscription, Pulakeshi became the supreme lord of three countries called *Maharashtrakas* which contained ninety-nine thousand villages. Hiun-Tsang who visited the Court of Pulakeshi II between A.D. 629-645, has given a graphic description of the kingdom of Pulakeshi II. The fame of the emperor Pulakeshi spread all over the adjacent countries and the contemporary ruler of

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[1] Nerur grant I. A. VIII, p. 43.
[2] I. A. VIII, p. 242.
[3] I. A. VII, p. 163, Nerur grant, saka 581 or A. D. 659; *ibid* VIII p. 43, Kochre grant.
[4] I. A. VI, p. 73, MSG (History), pt. I, p. 204.

Persia, Khusru II (A.D. 591 to 629) sent an Ambassador in A.D. 625-26 with valuable presents to Emperor Pulakeshi and friendly letters and presents thus seen to have been exchanged between these two emperors.[1] The silver coins of Khusru II are discovered in Chimbel-Ribandar area of the Tiswadi taluka of Goa, which indicate that Raibandar had trade with Persia during the regime of Pulakeshi II.

As already seen before *Satyashraya Dhruvaraja Indravarman* was ruling over 4 vishayas and mandalas of Konkan from Rewatidwipa from the beginning of the reign of Pulakeshi II in A.D. 610-11 Vishnuvardhana, his younger brother was placed by him in charge of the province of *Vengi* where he found another flourishing branch of the Chalukya dynasty, known as Eastern Chalukyas. A third kinsman of his, Shrivallabha, Sananandraja of the Senadraka family who was his maternal uncle was ruling as viceroy of *Avaretika Vishaya* of Konkan near Chiplun, North of Goa.

Pulakeshi's Nerur inscription records the grant of a piece of land measuring twenty-five *Nirvatanas* from a village *Kuvalalhasu* made to a brahmin *acharya* of Vatsa gotra. The grant also refers to his defeat of Harshavardhana impliedly and may be dated about A.D 613.[2]

Vikramaditya (A.D. 654-55 to 681), Pulakeshi's second son, who is described in the records as *Priyatanaya* or favourite son of Pulakeshi II, succeeded him. It seems he had arranged that Vikramaditya should succeed him at the principal seat of the empire and thus his elder son Chandraditya appears to have been appointed as a viceroy of the outlying province of South Konkan in the place of Indravarman. At the beginning of his reign and for over a period of 12 years after the death of his father in A.D. 642, the main Chalukya capital, Vatapi, seems to have been occupied by the Pallava king *Narasinhavarman* of Kanchi with the help of Cholas, Pandhyas and Keralas. According to *Mahavansa*, Ceylon prince Manavarman also seems to have assisted Pallava king in the capture of Badaim.[3]

We learn from the Nerur inscription of his grandson Vijayaditya dated saka 622 corresponding to A.D. 700, that 'Vikramaditya-Satyashraya, the favourite of the world, *Shri Prithvivallabha*, the great king, the supreme king, the supreme lord, the venerable one (*Maharajadhiraja-parameshvara*), who was conversant with the art of government, whose only aid was his sword, drove his enemies by means of one horse of the breed of *Chitrakantha* and acquired for himself the sovereignty of his father which was interrupted by a confederacy of three kings, subdued with the thunderbolt of his prowess the mighty

[1] B. G. I, pt. ii, p. 352.
[2] I. A. VIII, p. 43.
[3] S. I. I. vol. I, p. 144; *ibid*, vol. XI, p. 1; MSG, (History) pt. I, p. 218.

tumult of the mountains which were Pandya, Chola, Kerala, Kalabharas and other kings'. The same record states that his elder son Vinayaditya assisted him in arresting the extremely exhaulted power of Lord of Kanchi, just as Kartikeya at the command of his father Shiva and caused the rulers of *Kavera*, *Parasika* and *Sinhala* and other islands to pay him tribute, who was possessed the banner of *Palidhvaja* and all other mighty insignia of supreme dominion which he had acquired by crushing down lord of all the regions of the north.[1]

Vikramaditya's younger brother, *Dharashraya* Jayasinha seems to have assisted him in putting down the local disturbance in the north and north-western part of the kingdom. He is said to have defeated the whole army of Vajjada in the country between *Mahi* and *Narmada* rivers, and Vikramaditya seems to have assigned him the country called *Lata* or south Gujarat, whose descendants continued to rule over Gujarat for nearly seven decades and who are known as Gujarat Chalukyas.[2]

Chandraditya, his elder brother was ruling in the outlying province of Konkan. Nerur and Kochre grants of his queen Vijayamahadevi describe Vikramaditya as the favourite son of his father and also speaking in glowing terms about his victories and his regaining of the last sovereignty of his ancestors by conquering the enemies. In the Kochre record Chandraditya has been allotted the title of Maharajadhiraja or Paramount ruler, but in Nerur grant his subordination is indicated by his being mentioned after Vikramaditya.

The Nerur inscription[3] records a grant of land by Vijayamahadevi, queen consort of Chandraditya in the fifth year evidently of Vikramaditya's reign to a brahmin Aryaswami Dikshit, the son of Chaturvedi and the son's son of the Grihaspati of Vatsa Gotra, from a village *Tarakagara*. The village *Parishvasu* on the southern border of the land of grant can be identified with the present village *Parcem* from the Pernem taluka of Goa. It is dated as A.D. 659.

Another inscription of Vijayabhattarika or Vijayamahadevi was discovered at Kochre in Vengurla taluka on the northern border of Goa. It refers to a grant of Khajjana land from the Village Kochre to a brahmin of Vatsa Gotra. His name is not legible. It may be dated same as that of the Nerur grant i.e. A.D. 659. It was issued on the twelfth day of the bright half of the month of Vaishakha.[4] According to Fleet, these two grants were issued by Vijayamahadevi after her husband's decease, and as a regent during the childhood

[1] I. A. IX, p. 129.
[2] MSG, pt. I, p. 221.
[3] I. A. VII, p. 163.
[4] *ibid*, VIII, p. 45.

of her son, whose subsequent death lead to the accession of Vikramaditya I. Vijayabhattarika can be identified with the famous sanskrit poetess *Vijayanka* or Vijjaka praised by ***Rajashekhara*** and others.[1]

Vinayaditya (A.D. 680-696) succeeded his father Vikramaditya to the throne of the Chalukyas at Badami in A.D. 680. We learn from the Nerur grant of his son Vijayaditya, dated saka 622, corresponding to A.D. 700, that he assisted his father in reducing the power of the Pallavas of Kanchi and made the rulers of *Kavera* or *Kamera, Parasika* and *Simhala* and of other isands to pay him tribute. He acquired the *palidhvaja* banner and other insignia of sovereignty by inflicting crushing defeat on the lord of the whole of the North India.[2] It is not possible to identify the rulers of *Parasika* and *Simhala.* According to Dr. Mirashi the lord paramount of North India whom Vinayaditya defeated was the Vallabhi king Chiladitya III, who was a very powerful ruler who bore the paramount titles of *Paramabhatarika, Maharajadhiraja, Parameshwar* and *Chakravartin.*[3] *Vinayaditya* had the titles of *Rajashraya* and *Yuddhamalla.* He had a son named *Vijayaditya* and daughter *Kumkumamahadevi.*[4]

Vijayaditya (A.D. 696 to 733-34) succeeded his father in A. D. 696. We learn from his Nerur grant that while assisting his father in his northern campaigns, he advanced further than his father and won for him the insignia of *Ganga-Yamuna* and Palidhaja, the *dhakka-drum* and the *Mahashabdhas* and the riches of the enemy including elephants, rubberies and jewels.[5] The *Jayashraya Mangalarasa,* the Chalukya prince of Gujarath ruled as a feudatory of Vijayaditya.[6] This grant of Jayshraya is dated in saka 653 or A.D 731-32 and not as usual in Kalachuri Samvat.

The Nerur record of Vijayaditya is dated fourth year of his regnai year, saka 622 corresponding to A.D. 700. It records the grant of the village Nerur itself, which is situated between the village Valavali and *Sahamyapura* on the bank of the river Vilige from the Iridige Vishaya which is identified with one of the divisions of the Konkan made by the king from his camp at Rasen-Nagar at the request of one *Nandeya* to a brahmin *Devaswami,* son of *Revaswati* Dikshit. The village *Ballavalli* is modern Valavali and Nerur also is modern Nerur in the *Sawantwadi* taluka. Another Nerur grant of Vijayaditya is dated saka 627 (A.D. 705-6) in the tenth year of his reign. It records the grant

[1] MSG, (History) pt. I, p. 223.
[2] I. A. IX, p. 129; Nerur grant of Vijayaditya; his own grant, Ar. Rep. on Indian Epigraphy 1955-56 No. 13.
[3] MSG (History) pt. I, p. 223-4.
[4] I. E. XXIX, p. 207.
[5] I. A. IX, p. 129.
[6] JBBRAS XVI, p. 5.

of village Hikulamba, situated between the villages of Kumar and Pura from Mahasaptama or Iridige Vishaya, made at the request of one glorious *Upendra* to eight brahmins thoroughly learned in *Vedas* and *Vedangas*. Their names and *Gotras* are stated to be as Devaswami of *Bhardwaja gotra*, Karkaswami of *Kaushika gotra*, Yajnaswami of *Bhardwaja Gotra*, Devaswami of *Mudgala gotra*, Gargaswami of *Atreya gotra*, Rudraswami of *Kashyapa gotra* and Dashavarma of *Vatsa gotra*.

Besides the usual titles of Chalukya rulers, he had the title of *Niravadya Sahasarasika*. Vijayaditya ruled over 37 years and his reign is the conquest in the Chalukyas history. It is well-known for its cultural activities, especially for the construction of temples. He installed the images of *Brahma*, *Vishnu* and *Mahesh* at his victorious capital *Vatapi* in saka 699 or A. D. 799. His interest in learning is seen from his establishment of Brahmapuri at *Hikulamba* as already described above.

Vijayaditya was succeeded by his son Vikramaditya-II, who reigned during A. D. 733-34 to A. D. 744-45. The inscriptions of later Chalukyas of Kalyani describe their descent from *Bhimaparakrama* who according to those records was the younger brother of Vikramaditya-II. Another Nerur inscription records a grant made by Vikramaditya while his father was ruling at *Vatapi* to a brahmin named Sarvaditya Dikshita of *Kaundinya* gotra who learned the four vedas and who was the son of *Bhamunandaswami* of a village, *Malavura*. Though the inscription gives account of the ancestors of Vikramaditya-II, as found in other inscriptions on the basis of orthography Fleet had expressed his doubt about its genuineness. The village *Malavura* is not identified.[1]

During the reign of Vikramaditya-II, the Tajakas or Arabs invaded Gujarath province of the Chalukya empire. As stated in Navasari plates (A. D. 739), *Avanijashraya* Pulakeshin of the Gujarat branch of Chalukyas who was feudatory of Vikramaditya, repulsed the formidable attacks of the Tajakas, for which Vikramaditya, conferred on the titles of *Dakshnipatha-sadhara* (pillar of the Southern country) and *Anivartaka-nivartayatir* (the repellar of the unrepellable).[2]

While the Chalukyas of Gujarat were ruling over Lata country (Gujarat), two *Rashtrakuta* princes were placed by them in charge of some districts of Maharashtra. Rashtrakuta Govindaraja was in charge of Chipraruļana vishaya or Chipaluna in the Ratnagiri district of South Konkan during A. D. 741-42[3] Dantidurga the founder of

[1] I. A. IX, p. 135.
[2] C. I. I. IV, p. 137, MSG (History) pt. I, p. 227.
[3] E. I. XXIII p. 125, Teravan plate.

the Rashtrakuta dynasty of *Manyakheta* was ruling over the district of Chandanapuri-84 in the saka year 663 corresponding to A. D. 742. After taking bath in the *Guheshvaratirtha* at Elapura that is modern famous Ellora a grant was made to a brahmin of a village Pippalal from the Chandanapuri district. He has styled himself in the grant as *Mahasamantadhipati* which shows that he still continued as feudatory of Vikramaditya-II. At the direction of Dantidurga Dashavatara cave temples were excavated at Elapura.

Vikramaditya married two sisters from the family of Haiheyas. The elder one Lokamahadevi constructed a temple of Shiva by name *Lokeshvara* at *Pattadakala* in the Kaladagi district. The younger sister's name was *Trailokyamahadevi*. She built a temple at the same place dedicated to God. *Trailokeshvasa*. The latter was the mother of Kirtivarman who succeeded Vikramaditya. The title of Tribhuvana-charya was conferred on the chief Architect of the Lokeshvara temple. named *Gunda* or *Anirvaritacharya* The architect was also honoured by a fillet of honour called *perjerepu-potta*. Vikramaditya had a son Kirtivarman and perhaps a daughter named *Vinayavati*, queen of the Rashtrakuta prince Govindaraja referred to above. He had also the title of *Anvarita* besides his usual Chalukyan titles.

Kirtivarman, his son, continued to rule from 744-45 to 757 A. D. Rashtrakuta Dantidurga defied the Chalukyan might and defeated his forces the famous Karnataka army which had been expert in defeating the Pallavas, Keralas, Cholas, Harsha and *Vajrat*. Dantidurga's successor Krishna is said to have metamorphised the great boar (Chalukyan crest) into a fawn.[2] Chalukyan princes are thereafter mentioned in Rashtrakuta records as their feudatories. There are no records throwing light on the history of Chandramandala of the Bhojas under the Badami Chalukyas.

Shilaharas

After the suppression of the sovereignty of the Badami Chalukyas, the Rashtrakutas monarch Dantidurga laid down the foundation of the imperial dynasty of the Rashtrakutas in A. D. 753, who ruled over the Deccan, Karnataka and Gujarat for over 250 years from A. D. 753 to A. D. 973. Their seat of Government was at Manyakheta or Malkhed which is about 90 miles south-east of Sholapur, in Maharashtra. The Rashtrakutas were overthrown by the Kalyani Chalukyas about A. D. 980 and the supremacy of the Deccan again went into the hands of the old masters. The Rashtrakutas and also later Chalukyas looked upon Konkan as their feudatory province and only the Shilaharas

[1] I. A. X, pp. 162-64.
[2] *Ibid*, XII, p. 162.

and later on the Kadambas of Goa (from A. D. 1020) ruled over Konkan. The defence of the west coast of the Rashtrakutas and later on the Chalukyan empire was the responsibility of their feudatories, Shilaharas and the Kadambas. Thus they were maritime powers who defended the sea and maintained trade relations with countries from West Asia and East Africa.

There were three families of the Shilaharas—South Konkan or Goa (750 to 1020 A. D.) North Konkan or Thana (800 to 1250 A. D.) and Kolhapur or Valivade (1000 to 1205 A. D.). The Goa Shilaharas were replaced by the Goa Kadambas under the later Chalukyas of Kalyani, from A. D. 1020. The latter two branches also continued to rule parts of the Goa territory during the 12th and 13th century, whenever the power of the Kadambas was weakened. The principality of Chaul was situated on the border of North Konkan and of Chandrapur to the South of Goa and both the Shilahara houses of Konkan fought against each other for extending their authority over them. The history of Goa of this period is the history of fight for supremacy of the Western occan among these powers.

The records of all the three houses of Shilaharas claim their descent from the mythical Vidhyadhara prince Jimutavahana, the son of Jimutaketu, who according to the traditional account sacrificed himself as *Ahara* or food for *Garuda* the eagle, on the *Shila* or stone and rescued the life of the great *Naga* or serpent known as Shankhachuda. His descendants thus came to be known as *Shilaharas*. This account is in keeping with the medieval convention of deriving names of royal feudatories from some mythical heroes. The prakrit name *Shelar* seems to have been sanskritised as *Shilahara*. The Thana and Kolhapur Shilaharas styled themselves as *Tagarapuravaradhishvara* or 'the supreme lords of Tagara, the best of cities' and seem to have hailed from ancient Tagarapura, the well commercial centre of the Deccan referred to both by Ptolemy and the author of the Erthriyam sea, 2nd century A.D. It is now identified with the village Ter in Osmanabad district of Maharashtra, on the basis of extensive excavations carried on its ancient site.[1] Unlike the other two branches, South Konkan Shilaharas styled themselves as *Simhaleshvara* or 'the best of the Simhala kings. It seems from their records that they belonged to Goa or South Konkan, which seems to have been named in their records as Simhala[2]. It may be stated here that in the Ganadevi stone inscription dated saka 964, corresponding to 1042 A.D., the conquest of Goa island by the Kadamba Shashthadeva II is described as the conquest of the

[1] E. I. III, p. 292; I. A. V, p. 278; JBBRAS XIII, p. 3; MSG (History) pt. I, p. 260
[2] E. I. III, p. 292.

Simhala.[1] All the three branches had their standard of golden eagle or *suvarnagarudadhvaja*. As engraved on the seal of the Chikodi or Pattanakudi copperplate of King Avasar I, of the Goa Shilaharas, the eagle is in human form, with two arms and fluttering wings above his shoulders. He is wearing *Karanda-mukata* on his head. He is seated on his haunches with two hands folded i.e. in *Anjalimudra*. They worshipped Goddess *Mahalakshmi*. 'The temple of Mahalakshmi at Netorli (Sanguem taluka) seems to have been constructed during the regime of Goa Shilaharas.

Goa Shilaharas

There are three copperplate grants of the Goa Shilaharas—*Chikodi or Pattanakudi* grant of Avasara III dated saka 910/A.D. 988, the Kharepatana grant of Rattaraja dated saka 930/A.D. 1008 and another Valipattana record of the same ruler dated saka 932/A.D. 1010.[2] The Kharepatana charter gives the complete geneology of the Rashtrakutas, their feudal lords upto the times of the Shilahara king Rattaraja, who was the last ruler of the Goa Shilaharas. After the fall of the Rashtrakutas (A.D. 983) he governed South Konkan as a feudatory of the Kalyani Chalukyas. The names of Chalukya rulers who were his feudal lords are also mentioned in the grant. The geneology of the Rashtrakuta and Chalukya emperors as recorded in Kharepatana plate—Dantidurga ; his uncle Krishna I ; (Dhruva) Govinda II ; (Govinda III) Nirupama or Jagattunga ; his son (Krishna II) Amoghavarsha or Akalavarsha ; his grandson Indra III ; his son Amoghavarsha II ; his younger brother Govinda IV ; his uncle Baddiga ; his son Krishna II ; his brother Kottiga ; his nephew Kakkala. Chalukyas—Tailipa—Satyashraya.

As stated in Kharepatana plates, Shanaphulla, the founder of the Goa Shilahara house acquired the south Konkan as a favour from emperor Krishna I, who succeeded Dantidurga in A.D. 759. As we have already seen above, the north Konkan was conquered by Dantidurga, the founder of the dynasty and was being ruled by his governor *Anirudha* during the early part of the 8th century A.D.[3] Krishna I seems to have extended his conquest to the South Konkan in which Shanaphulla seems to have assisted him. The geneology of the Goa Shilaharas based on Kharepattana plate is given below. The periods of the regime of each ruler is approximately worked out from the earliest known date of Rattaraja, A.D. 1008 who was the tenth and

[1] Important Inscriptions of Baroda State I, pp.64-66.

[2] Chikodi or Pattanakudi plates, An. Rep. B. I. S. Mandal, Poona, Saka 1835 p. 430; E. I. XXXVII, p. 56); Kharepatana plates, JBBRAS, I, p. 209; E. I. III, p. 292; Valipattana plate of Rattaraja; Mirashi, V. V., *Shilahara Rajavamshacha Itihas* p. 233; IHQ IV;p. 214.

[3] Mirashi, *Manor plates in studies in Indology*, Vol. II, p. 10.

last ruler of the house, from Shanaphulla, the founder of the family, assigning 25 years for the generation of each ruler.

Shanaphulla (A.D. 765 to 795)—Dhamuriyara (A.D. 795 to 820)—Aiyaparaja I (A.D. 820 to 845)—Avasara I (A.D. 845 to 870)—Adityavarman (A.D. 870 to 895)—Avasara II (A.D. 895 to 920)—Indraraja (A.D. 920 to 946)—Bhima (A.D. 945 to 970)—Avasara III (A.D. 970 to 995), known year A.D. 988 ; —Rattaraja (A.D. 995 to 1020), known years A.D. 1008 to A.D. 1010.

The geneology of the family as given in Pattanakudi grant is slightly different. It starts with Dhammiyara, the second ruler of Kharepatana grant and does not refer in it to Shanaphulla, the founder of the house. It adds name of *Ammala* between Aiyapa and Dhammiyara. It also omits Avasara I the son of Aiyapa. From Adityavarman, the geneological accounts in both the grants is identical.

As seen before, Shanaphulla (765-795 A.D.), the founder of Goa Shilahara house obtained the lordship over the territory between the Sahyadri mountains and the sea coast (*Samudratira Sahyantadesha*) by the favour of his suzerain Krishna I. From both the grants of Rattaraja, this territory seems to have been named as *Simhala* (*Dwipa*) by the Shilaharas just as it was named as Rewatidwipa by the Badami Chalukyas. The modern Goa Velha or *Gopakapattana* of the Kadambas from the *Gowadwipa or Tiswadi Taluka* might have been its capital under Shanaphulla. It is named as *Gomantadurga* or the Fort of *Gomanta* in the grant of Kolhapur Shilahara King Gandharadiaya and Jatiga I. The founder of that dynasty seems to have held it during the middle of the 10th century.[1] The Chikodi grant has ommitted the name of Shanaphulla.

Dhammiyara (795-820 A.D.) succeeded Shanaphulla. He is said to have fortified the Balipattana. He must have added some more territory to his kingdom towards the north and thus seems to have later shifted his capital to a more central place at Balipattana which might have been the same as the ancient part of Balipattana referred to by Ptolemy. The Goa Shilaharas were in constant war with the Chandramandal rulers, throughout their regime, and its identification with Bahli from Chandramandal itself in the modern Sanguem Taluka seems improbable. It may be identical with Kharepatana from Ratnagiri, where the two grants of Rattaraja of the Goa Shilaharas were discovered.

According to the Kharepatana plates, Aiyapa (820-845 A.D.) succeeded Dhammiyara. The Chikodi plate refers to another prince named *Ammala* who was succeeded by Dhammiyara. But it does not give any description of this prince. Aiyapa was a Vigigishu ruler and

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[1] SMHD, I, p. 33.

Kilakasamvatsara Jyeshtha 15, corresponding to 22nd May A.D. 1008. The week day is not mentioned. It records a grant of 3 villages—Kushmandi, Asavanire and Vadagule to a brahmin Atreya, who was the disciple of *Acharya Ambhojashambhu*, who belonged to *Karkaroni* branch of *Mattamayura* clan of *Saiva* sect, for the worship of God Avveshvara and also the maintenance of the temple. God Avveshvara seems to have been named after his father, Avasara III, Mattamayura the original seat of the clan is probably the same as Kadvaha in Central India when magnificent temples like that of Khajuraho were constructed by the Acharyas of the clan under the patronage of local rulers.[1] The ships coming from foreign countries were to pay a contribution for the worship of God at the rate of one *suvarna Gadyanaka* for each ship, and those coming from other parts of the country were to contribute at the rate of one *suvarna Dharana* for each ship. The ports of Chandrapur and Chemulya were exempted from this payment. Besides, families of courtesans, oilmen, potters, gardeners and washermen were provided with accommodation in the interior part of the fort, who were employed in the service of the God.

Rattaraja is described as *Mandalik-Shri*. The grant is made with the consent of the citizens and his Ministers and Amatyas. It was composed of *Lokaharya* the son of *Devapala* who was the Minister in charge of affairs of the capital, *Nagara-Sandhivigrahika*.

There is another grant of Rattaraja dated Sunday, the first day of the dark half of the month Paushya, Sadharana Samvatsara saka 932 corresponding to 24th December A.D. 1010.[2] It records grant of a plot of land named *Kalvala* from the village *Bhaktagrama* and a garden of betelnut near the *agrahara* village, *Palaure* to *Sankamaiya* son of Brahman *Senavai* Nagamaiya. This is probably the earliest reference to *Shenavi* Brahmins of Goa.

In previous record, Rattaraja has styled himself as *Mandalikshri* while in this grant he is described as *Mahamandalika Shri Rattarya Raja*. The emperor Vikramaditya V of Kalyani Chalukyas, succeeded Satyashraya in A.D. 1009. He was weak ruler and could not punish his powerful feudatories. Taking advantage of this situation Rattaraja seems to have declared himself independent before the issue of the present grant of A.D. 1010. It also does not state geneology of any of his suzerain rulers.

Rattaraja ruled over Goa from about A.D. 995-1020. There is no record of the house of Rattaraja subsequent to his grant of A.D. 1010. It appears that the career of Goa Shilahara house came to an end within about 15 years from that date. Jayasimha II, brother of Chalukya

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[1] E. I. III, p. 299; C. I. I. IV, pp. cli.
[2] I. H. Q. IV, p. 203.

Vikramaditya V invaded Konkan in A.D. 1024, overthrew the ruler of *Saptakonkan* i.e. south Konkan and appropriated all his possessions. This is recorded in his Miraja plates (A.D. 1024) which were issued by him after his conquest of the Chola and South Konkan from his camp at Kolhapur in the course of his campaign for the conquest of northern countries.[1] Thus ended the career of the Goa Shilahara dynasty which ruled over 250 years and which was the earliest of the three Shilahara houses.

Thana Shilaharas :

Northern Konkan or Thana Shilaharas ruled from A.D. 800 to 1240. They were also loyal feudatories of Rashtrakutas like the Goa Shilaharas and no serious conflict seems to have arisen between the two houses during the regime of Rashtrakutas. After the fall of the Rashtrakutas during the period of unsettled political conditions, Aparajiha (A.D. 975 to 1010) of Thana Shilahara house, seems to have extended his sway for some time over South Konkan upto Chandrapur and had begun to assume titles like *Paschimasamudradhipati*, lord of the western ocean.[2] His power was reduced by Satyashraya Chalukya by invading his kingdom (A.D. 1005) and was made to recognise the Chalukya suzerainty.[3] His son Vajjada II (A.D. 1010-1015) succeded him. We learn from stone inscription at Hangal that he had offered his daughter *Kundaladevi* to the Kadamba king Shashthadeva II (A.D. 1005-1050) of the Goa Kadambas who was struggling for becoming lord of the Konkan.[4] Vajjada was succeeded by his younger brother Arikesarin *alias* Keshideva I (A.D. 1015 to 1025). Paramara king Bhoja seems to have occupied Konkan for some time from A.D. 1020 during his regime.[5] The Chalukya king Jayasimha seemed to have turned his attention towards the North Konkan which was held by Paramaras from A.D. 1020, after his annexation of the south Konkan in A.D. 1024 as already described in his Miraja plates. It is not known whether he made Arikesari or his successor Chhittaraja to accept his supremacy.

Kolhapur Shilaharas.— Gonka of Kolhapur Shilaharas seems to have been placed in charge of the south Konkan-Goa territory of Rattaraja, after its conquest by Chalukya Jayasimha IV in A.D. 1024. He had styled himself as lord of Konkan[6] and seems to have already defeated the Chhitaraja (A.D. 1025-1040), successor of Arikesari. This civil war between the two houses of Shilaharas is referred to as Dayadavyasana

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[1] I. A. VIII, p. 18.
[2] Janjira plates A. D. 993 ; Mirashi V. V., *Shilahar Rajavamshacha Itihas* Nagpur 1974, p. 21.
[3] I. A. vol. XL, p. 41.
[4] E. I. XV, p. 333.
[5] *Ibid.*, XI, p. 182; *ibid.*, XVIII, p. 322.
[6] JRAS IV, p. 281.

in the Kharepatana plate of Anantadeva of Thana Shilaharas.[1] The struggle between the two houses for the supremacy over the entire Konkan facilitated the conquest of Konkan by the Kadamba King Shashthadeva II. The Narendra inscription has given detailed description of the Konkan expedition of Shashthadeva II. It is stated that he left from his capital Chandrapur and marched towards the North and he first annexed the south Konkan called Konkan nine hundred and advancing further he overran *Kavadi-dvipa*, North Konkan. As he took Kavadidvipa and many other regions, built a bridge with lines of ships reaching as far as Lanka (i.e. Goa) and claimed tribute among grim barbarians, exceedingly exalted was the dominion of the Kadamba sovereign, which many called a religious estate for the establishment of Rama.[2] The southern Konkan was annexed to their territory by the Kadambas and northern Konkan seems to have been restored to Chhittaraja on his accepting Kadamba supremacy. We learn from the Sawai-Verem grant (Marcela plate) A.D. 1038 of his son Gupalladeva that Shashtha had distributed charities at Sthanaka or Thana, the capital of the Northern Shilaharas. It seems Chhittaraja had accepted his authority before A.D. 1038.[3]

Shilahara administration

The Thana Shilaharas carried the title of Mahasamanta dipati, while the Goa Shilaharas styled themselves as Mahamandalikas or Mandalika. They ruled as feudatories of their suzerain Rashtrakutas or later Chalukyas. According to their feudatory status they were required to assist their feudal lord in his wars, whenever called for, but no such instances have been recorded. It seems they used to pay him fixed tribute in recognition of his supremacy. The king was assisted in his administration by a ministry consisting of *Pradhan*, *Amatya*, *Sandhi-Vigrahika*, Pauras of Nagar or town, heads of *Hanjaman* or settlement of *Shrenis* i.e. artisans, traders, etc. The records show that the ministerial offices continued sometimes in the same family for more than one generation. The towns were administered by the committees consisting of representatives of important classes, heads of *Shrenis*, *mathas*, etc.

It seems that goods imported at the ports from abroad were taxed at higher rate than the goods coming by the sea from the other ports of the country. Kharepatana plate lays down that ships coming from other countries should contribute at the rate of one *suvarna gadyanaka* for each ship for the management of the temple in the capital, while those coming from the other parts of the country were required to

[1] I. A. IX, p. 37.
[2] E. I. XIII, p. 369
[3] S. I. M., p. 46.

contribute at the rate of one *suvarna dharana* for each ship. As stated in the same records, the claimants title to his land acquired as a grant was considered valid only when the charter had royal attestation, a seal with royal insignia, was drafted in a conventional form and was accompanied by possession.

The Shilahara rulers were Shaivites. The Shiva temple at Curdi (Sanguem) seems to be the best specimen of the structural remains of the Shilahara temple architecture in Goa. Mahalakshmi temple at Netorli also seems to have been originally constructed under the Goa Shilaharas. Saptakoteshvara temple at Opa (Ponda) also belonged to the same period. The grant of Rattaraja to Avveshvara temple (A.D. 1008) in his capital at Ballipatana throws light on the temple institutions of the Goa Shilaharas. The grant provides for the maintenance of the family of the priest of the temple. There was an oilman to supply oil for the lamp of God, a gardener for the supply of flowers for worship of the deity, a potter to arrange for pots for serving foods, a washerman for cleaning the clothes, a courtesan for performing dance before the God. All the religions—Hinduism, Buddhism and Jainism were equally respected by the Shilaharas. It is stated in Chikodi grant of Avasara III (A.D. 988) that a portion of the royal share of betel-nuts received from the three donees of the grant by *Hadap* was to be donated for the worship of *Arhanama*.

Kadambas of Goa (A.D. 1008 to 1300)

The Kadambas ruled over Goa and south Konkan as *Mahamandaleshvaras* or feudatories of the Chalukyas of Kalyani (A.D. 973 to 1162) and later on of the Yadavas of Devagiri. The earliest family assuming the name of the Kadambas, ruled over Banavasi, Sirsi taluka, North Kanara district and Palasika, modern Halsi in Khanapur taluka of Belgaon district of Karnataka State during the 6th century A.D. Their territory was annexed to his domination by Kirtivarman I of the Badami Chalukyas by the end of the 6th century A.D.[1] Their ancient name Kadambas is referred to as Kadambas in the records of the later Kadambas. The difference in the spelling of the first syllable, according to Fleet impliedly indicate that they could not claim their descent directly from the early Kadambas.[2] The Chalukyas of Kalyani recognised the existence of the Kadambas as not negligible and made common cause with them in their conquest of the Rashtrakutas.

The Goa Kadambas originally held from Banavasi the ancient capital of early Kadambas. Taking the benefit of the disturbed political situation in the Deccan, the Goa Kadambas seem to have settled themselves by the end of the 10th cenntury A.D. in the Halshi district

[1] I. A. XII, p. 68.
[2] B. G. I, ii, p. 568.

Kantakacharya or Shashthadeva I: The latest known date of Shashthadeva I, the great-grandson of Kantakacharya or Shashtha I, the founder of the Goa Kadambas is saka 964/A.D. 1042, allowing 25 to 30 years for each generation, the date of Shashtha I, may be fixed at about 960 A.D. He was thus contemporary to Chalukya King Taila II who overthrew the Rashtrakutas and established himself as Chalukya emperor of the Deccan at Kalyani by 973 A.D. Sawai-verem plate states that Kantakacharya was accomplished in *Trivargas* and installed many kings and his fame spread beyond the seas. Thus he might have made common cause with the new rising power of Chalukyas and laid down the foundation of the Kadamba kingdom in the small principality of Chandrapur.

A fragmentary stone record referring to *Rayana Shashthadeva*, which on paleographical grounds can be assigned to the middle of the 10th century A.D. was found at Curdi (Sanguem) which attributed to him high sounding titles like *Parameshvara, Paramabhattaraka, Prachanda-danda-mandala* and thus it seems that he had already established by the middle of the 10th century as an independent monarch of Chandramandal which seems to have included modern Sanguem and Ponda talukas.[1] As a result, Bhima Shilahara (A.D. 945-970) who was ruling over south Konkan, had to reverse the ancient policy of his house of friendship with the ruler of Chandramandal and as stated in the Kharepatana plates, he invaded Chandrapur and annexed it to his dominion to curb the further rise of the Kadambas.[2] However, Shashtha's power was rising and he is therefore compared with the unknown king *Zampudacharya* of Konkan in Sawai-verem plate. He is the same as Shashtha I of Ganadevi Inscription and Chaturbhaja of Goa plates of Jayakeshi I.[3] Records of later date omit his name from the geneology and they start it with only Guhalla I, the grandson of Shashtha I.

His son, named Nagavarman was married to Queen Malavyadevi. He is described as Narendra but no exploits of his are recorded and thus he might not have ruled for a long time after his father. He is mentioned only in Sawai-verem and Ganadevi records, his name is also omitted in later records of the family.

Guhalladeva I (980-1005 A.D.) succeded Nagavarman. He was firmly established in Chandrapur. The grant of his grandson Jaya-keshi I, states that "he annihilated many wicked enemies of his crown and took possession of their riches and innumerable pearls".[4] Sawai-verem plate of his grandson Guhalladeva II describes him as

[1] Ink impression, State Museum, Panaji-Goa.
[2] JBBRAS, I, p. 20 ff.
[3] Pissurlencar P. S., *Inscricoes Pre-Portugueses de Goa in* O. P. II, Series, 22, p.387.
[4] O. P. 22, p. 398 ff.

Vyagramari or slayer of a tiger and compares him with Arjun the great warrior of Mahabharat. It seems he enjoyed higher power than his predecessor. He is described as an alloy of the kings reigning in countries extending to the seas, probably the neighbouring Shilaharas of South Konkan. He was married to Gaurayadevi[1] The record of Jayakeshi I (A.D. 1052) narrates an interesting episode about him that while he proceeded on pilgrimage of the famous God Shiva of Somanath at Prabhasapatanna in Saurashtra in a ship from Chandrapur, on his way the mast of his ship broke off and he had to take shelter of Goa, the nearest port where he was helped by a wealthy Arab merchant (Tajjika), Madhumat or Muhamad, who was the chief of the *Hanjamananagar* or settlement of traders in the Goa island. He received Guhalladeva by offering him a large amount of his wealth.[2] It seems thus that the Goa island was with the Shilaharas of Valipattana and either Avasara III or his son Rattaraja Shilahara (A.D. 995-1020) might have been ruling over it.

Shashthadeva II (c., 1005-1042 A.D.) succeeded Guhalladeva I, at Chandrapur. The Gudikutti (Sampagaon) stone inscription of his son Jayakeshi I gives him date of saka 928-29/A.D. 1007-08 and describes him as *Mahamandaleshvara* or feudatory of Chalukya King Jaysimha who was probably then Yuvaraja. His latest date is known from his Ganadevi stone inscription which is dated saka 964/A.D. 1042. The copperplate grant of his son Guhalladeva II gives him third date of saka 960/A.D. 1038.

As is seen from his Janjira plates (A.D. 995) Aparajit Shilahara (A.D. 975-1010) of Thana, did not submit to the Chalukyas of Kalyani and seems to have declared himself as *Paschimasamudradhipati* or the lord of the western ocean and in alliance with Rattaraja (A.D. 995-1020) of Goa Shilaharas, extended the southern border of his kingdom upto Chandrapur.[3]

Shashtha II was an ambitious ruler and was governing over Chandramandal as Mahamandaleshvar of the Chalukyas and was bound to come in clash with the Shilaharas of Konkan. Vajjada (A.D. 1010-1015), the successor of Aparajit thus seems to have settled his dispute with the Kadambas of Chandrapur by offering Shashthadeva II his daughter Kamaladevi in marriage.[4]

Meantime, the Konkan was invaded by Paramara King Bhoja in A.D. 1020 and Arikesari, the son of Vajjada II had to accept the supremacy of the Paramaras.[5] The Bhoja ruler seems to have occupied North Konkan for few years from A.D. 1020. The Chalukya king

[1] SIM, p. 57 ff.
[2] O. P. 22, p. 391.
[3] BSI, I, pp. 35 ff.
[4] E. I. XV, p. 333.
[5] *ibid*, XI, pp. 182 ff; *ibid*, XVIII, pp. 322 ff.

Jayasimha therefore after defeating the Cholas invaded the South Konkan and annexed the possession of the Goa Shilaharas from its last ruler Rattaraja or his son in A.D. 1024 and a part of it was placed in charge of King Gonka of Shilahara house of Kolhapur, while he had encamped at Kolhapur in the course of his campaign against North Konkan.[1]

After the annexation of South Konkan by his suzerain Jayasimha, Shahthadeva II seems to have taken the benefit of the discord between the Kolhapur and Thana Shilahara houses which is referred to as *Dayadavyasa* in Kharepatana plates of Anantadeva,[2] and marched towards the north from his capital Chandrapur, annexed the South Konkan of Goa Shilaharas and overran Kavadidvipa or North Konkan of Chittaraja (A.D. 1025 to 1040) of Thana Shilaharas. About his expedition against the Thana Shilaharas the Narendra inscription of Jayakeshi II (A.D. 1125) states that, "as he took Kavadidvipa and many other regions, built a bridge with lines of ships reaching as far as Lanka and claimed tributes among grim barbarians, exceedingly exalted was the dominion of Kadamba sovereign which many called a religious estate of establishment of worship of Rama ".[3] The Degamve record of Shivachitta Permadi dated A.D. 1174 states that, "the Lord of Lanka was subdued by him though he had not to his aid the building of a bridge, nor the siege of fortress nor the efforts of the monkey troops, nor yet the energy of the son of Vasumitra.[4] The island of Lanka referred to in these inscriptions does not refer to Ceylon. In their records of the Goa Shilaharas, they styled themselves as '*Simhaleshvaras*' or 'Lord of Simhala'. It is thus metaphorically applied to the island of Goa. The Thana Shilaharas accepted the Kadamba supremacy and Shashthadeva seems to have restored to them the Kavadidvipa while Simhaladvipa or South Konkan was annexed to his kingdom of Chandramandala. The King Mammuri (A.D. 1025-1040) the successor of Chittaraja treated Shashthadeva with great respect and bestowed on him his daughter with much pomp and gave him lakhs of gold.[5]

We learn from his records referred to above that Shashthadeva paid veneration to Shri Mahalakshmi of Kolhapur, God Mahabaleshwar at Gokarna and Somanath at Prabhas in Saurashtra. It is further stated that he distributed wealth and made donations to worthy persons at Sthanaka and Kolhapur. Thus it seems that his jurisdiction extended very extensively on the west coast of India from Saurashtra to North

[1] Miraj plates, I.A. VIII, p. 18.
[2] I. A. IX, p. 37.
[3] I. A. XIII, pp. 309 ff.
[4] JBBRAS IX, p. 266.
[5] E. I. XIII, p. 310.

Kanara and the Shilaharas of Kolhapur and Thana might have been subjected to his authority. It seems he was often going on pilgrimage of God Somanath. He was married to Akkadevi, the sister of Chalukya emperor Jayasimha II. Another inscription refers to his voyage to Somanath in a very interesting manner, "When white plastered houses, alleys, horse stables, flower gardens, agreeably connected bazars, parlour quarters, were charming the eye, the lord of the ocean (Shashtha) duly proceded on his ship over the sea in sport, along with the whole population of Gove with great pomp as far as the land of Saurashtra". It further states that on this occasion Shashthadeva fixed a lower price of camphor so that all might partake of the worship of God Somanath.[1] The above description of the ancient city of Chandrapur, the capital of Goa Kadambas, reflects on its glory as an important maritime centre. His lithic record (A.D. 1042) found at Ganadevi in Surat District of Gujarat State purports to record the construction of a market place (Madapika) near Ganadevi port. It supports his keen interest in promoting the foreign trade and commerce carried through the port of Ganadevi with East African Coast. The 'Prashasti' was recorded while he was on his pilgrimage to Somanath.

Guhalladeva II.—Guhalladeva II was the elder son of Shashthadeva II. His Sawai-verem record states that he got the same respect and honour from the other kings as his father. "*Rajeva Radnya Bahumana patrah*". It gives him the date of saka 960/A.D. 1038. His father Shashthadeva continued to rule for a long period from c., 1008 to 1042 A.D. It is thus possible that he being his elder son, his reign synchronised with that of his father and he must have assisted his father in his conquest and consolidation of the Kadamba kingdom. His record states that he defeated many powerful kings from seven Malayas, and made them feudatories. He seems to have assisted his father further in his conquest of kings of Saurashtra, Anga, Kalinga, Maharashtra, Vindya, Kanchi and in defeating in naval engagements rulers of Simhala or Konkan, Parasika, Kanakadvipa i.e. North Konkan. Reference to Simhala and Kanakadvipa indicates the part played by him in subduing the Shilaharas of south as also north Konkan. It is reported that Parasika was a small island near Bombay and its memory is still retained by one of the hills called Parasika with a tunnel through which central railway trains pass.[2]

The grant records the donation of a village Savoi from the Ponda taluka to his family preceptor Narayana Bhatta Pattavardhana on the recommendations of his elder brother Govinda Bhatta, who was

[1] E. I. XII p. 309-10.
[2] Marcella plates in *Kadamba Kula*, pp. 388 ff., the same is re-edited by Dikshit M. G. in Sawai-verem plates from *Selected Inscriptions of Maharahshtra* pp. 46-66.

the Minister of Religion *Purohit*, in the Council of his father, Shashthadeva II.

Viravarmadeva (c., 1042 to 1054 A.D.).—It seems from the Curtorim grant of Viravarmadeva, recently discovered that Viravarmadeva, the second son of King Shashthadeva II, succeeded him after his death. It gives him the earliest date of saka 971 Sarvadhari Samvatsara, corresponding to A.D. 1049 and also describes him with royal titles of *Samadhigata Panchamahashabdhah* and *Mahamandaleshvar* or lord of the feudatories.

This is the first known grant of the Goa Kadamba King Viravarmadeva who is described in the grant as son of Shashthadeva and who was ruling over Gopaka. His name is not found in any of the known geneologies as successor of Shashthadeva but Jayakeshi I, is referred to as successor of Shashthadeva in the inscriptions of the Goa Kadambas. However, there is a reference to this King in a stone inscription of saka 976 corresponding to A.D. 1054 which is preserved in the Museum at Old Goa wherein one *Annayya, Dharma-mantri* of Panjanakhani i.e. modern Panaji, is described as meditating at the feet of Viravarmadeva, who is adorned with the titles of *Samadhigatapanchamahashabdas* and also *Mahamandaleshwar*. The record further described Annayya as Viravarmadeva's coat of mail and exemplary servant of Jayakeshi. In that inscription, Jayakeshi is referred to without any royal titles.[1]

Thus, we learn from the inscription for the first time that Viravarmadeva, elder brother of Jayakeshi I succeeded the King Shashtha about A.D. 1049 and both Viravarmadeva and Jayakeshi I, jointly ruled from Gopaka and later on Jayakeshi I, succeeded Viravarmadeva as he perhaps died without issue and therefore we do not find his name in the known geneologies of the Goa Kadambas. Similarly the name of Guhalladeva II, perhaps the eldest son of Shashthadeva referred to in Sawai-verem grant of saka 960 corresponding to A.D. 1038, is also not noticed in the geneologies of the later Goa Kadambas.[2] It appears from this record that for the first time the capital of Goa was shifted to Gopaka from the ancient city of Chandrapur not by the Kadamba King Jayakeshi I, but by his elder brother King Viravarmadeva of this inscription. His successor Jayakeshi I, seems to have organised navy for its defence by the seaside.[3]

The copper plate records the grant of a piece of land named *tundukapur*, situated in the *Kudatarika-grahara* and the Desh or country named *Chhatsathi* i.e. modern Salcete or Sashti taluka of Goa made by the

[1] E. I. XXXVII, p. 284.
[2] Dikshit, *Selected Inscriptions from Maharashtra*, p. 46.
[3] O. P. No. 22, p. 386.

Kadamba King Viravarmadeva, while he was ruling from his capital it Gopaka, on Wednesday, the 5th of the dark half of the month of 'yeshtha, Saka year 971, named *Virodisamvatsara*, corresponding to A.D. 1049.

The donee was the learned brahmin *Madhavarya* who was the son of ı brahmin Shashthadev and grandson of Madhav, who belonged to *Kaushika Gotra*. It was exempted from all taxes. It was valued at !1 Bhairava Gadyanakas which was a gold coin of the Kadambas. ts weight in general was 4·75 gms. The grant was made by the king iimself in the presence of God *Malege Bhairava*, and his council of ninisters which was composed of *Narayan* Purohit or Chief priest of .he King, two Pradhans or Ministers, *Govinda* and *Madhavarya* and *Malaparya* who was *Sandhivigrahika* or minister for war and peace.

The geographical names mentioned in the copperplate are *Gopaka, Kudatarikagrahara, Chhatsathi* country and place name *Tundukapur*. Gopaka is modern Goa-Velha. Kundatarika can be identified with Curtorim. Chhatsathi is Salcete or Sashti. The place name Tunduka-pur may be indentified with the modern vado of Tambeti from Curtorim.[1]

Jayakeshi I(c., 1052 to 1080A.D.):

Viravarmadeva was succeeded by his younger brother Jayakeshi I. His earliest date saka 974/A.D. 1052 is contained in his Gudikattu Dharwad) Stone inscription. There are two copperplate grants in his name—Gopaka grant of saka 975/A.D. 1053 and Panaji plate of saka 981/A.D. 1059 and there are two stone inscriptions; Panjani-thani stone inscription of saka 976/A.D. 1054 and Raia stone iscrip-ion saka 993/A.D. 1071. As stated in Vikramankadevacharita of Bhillana and also in records of his successors, he is said to have offered his daughter in marriage to Chalukya Emperor Vikramanka-deva VI in A.D. 1076. We find references to his son Guhalladeva as Mahamandaleshwar from A.D. 1081 which appears to be the latest date of his regime.

The longest rule of his father extending over 40 years, assisted by his sons Guhalladeva and Viravarmadeva firmly established the Kadamba power in the Konkan. According to his Gopaka plate, Jayakeshi organised a strong fleet at Velakula, the port of Gopaka on the bank of the river Zuari in A.D. 1052. It was the erstwhile maritime commercial settlement of Tajjika or Arabs of Gopaka Goa Shilaharas.[2]

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[1] Filipe Nery Xavier, *Bosquejo Historico das Comunidades*, p.332.

[2] Gopaka plate-Goa Archives, *Moncoes*, Vol. 93-D; Pissurlencar- *Inscricoes Pre-Portuguesses de Goa*, in *Oriente Portugues*, no. 22, pp. 386 ff; JBBRAS IX p.283.

Chhaddama, the Arab leader who commanded the merchant fleet, was appointed as governor of the city. The Arab family of Chhaddama was associated with the Kadambas since the time of Guhalladeva I, whose ship was rescued by his father Madhumad, while on its way to Somanąth on pilgrimage. Originally the family belonged to Cheul from the North Konkan. The commercial prosperity of the Gopaka-pattana under Jayakeshi I is attested by the fact that it had trade relations with no less than fourteen countries such as Kadah, Srytem (Sumatra), Bomgalla, Pusta (Pulikat), Chanda (Chola), Pandya, Keral, Lat, Gurjar, Zungavar[1].

Gudikatti inscription (from Sampagaon) referred to above, represents Jayakeshi I as the lord of the Konkan and no title as a feudatory of Chalukya Someshvar is allotted to him.[2] The Panjanakhani stone inscription gives him the epithet of *padaval-endra* i.e. *Paschima-Samudradhishvar* or lord of the western ocean. We learn from his Panaji copperplate (A.D. 1059) that he defeated Parmaras, Latas, Gurjars, Pandyas, Pallawas and Cholas and the rulers of hilly region (Kishkindha) and Lanka, were frightened of him. Thana Shilaharas seem to have been referred to here metaphorically as rulers of Lanka.[3]

We learn from the later records of his successor that he destroyed the king of Kapardikadvipa, Cholas and uprooted Kamadeva[4]. It seems the king Mummuri (A.D. 1045-1070) of Thana Shilaharas was severely defeated or destroyed by Jayakeshi taking the benefit of the civil war (Dayadavyasana) between the Thana and Kolhapur houses of Shilaharas towards the end of the regime of that king[5]. The Kharepatana plates of Anantapal (A.D. 1094) state that he routed the desperate and vile Yavanas (Muslim) who might have assisted Jayakeshi I during his invasion of the Shilahara country and inscribed his fame on the disc of the moon[6].

Kirhalasige Stone Inscription (1186-87) states that Jayakeshi caused Chalukyas and Cholas to become friends at Kanchi. It seems thereby that Jayakeshi joined his son-in-law, the Chalukya emperor, Vikramaditya VI in his expedition against the Chola King Rajakesarivarman and negotiated the treaty of friendship between them. The cordial relations were further established between them when Rajasekhar offered his daughter in marriage to Vikramaditya.[7] Kirhalasige record further adds to his achievements that he established the

[1] Goa Archives, *op. cit.*
[2] B. G. I, pt. ii, p. 567.
[3] SMHD IV, pp. 36-37 and *Kadamba Kula*, p. 399.
[4] JBBRAS IX, p. 272.
[5] I. A. IX, p. 34.
[6] *ibid*, p. 33 ff.
[7] JBBRAS IX, p. 242.

Chalukyas in their kingdom ; what is probably meant is that he assisted Vikramaditya in acquiring the throne of Kalyani during his fight with Someshvar II, his elder brother.

It seems from the Raia (Goa) Stone Inscription of Jayakeshi I that sometime in A.D. 1071 he had to destroy his powerful rival on the southern border of Goa. It states that Gobbarasina the champion of lord Bhupa of Valliyapura fought and died.[1] It is not known whether Bhupa referred to in the Raia inscription had any connection with Kamadeva who is said to have been destroyed by him. The last achievement of Jayakeshi I mentioned in later records is that he assembled the Kadambas and made Banavasi Kadambas obedient to their suzerain.[2]

The enormous influence of Jayakeshi I is evinced from dynastic marriages that were concluded between the Kadambas and the other royal families of this time. In 1076, one of his daughters was married to the Chalukya prince Vikramaditya VI. Another, Minaldevi was married to King Karna I (1063 to 1093 A.D.) of Anhilwad Chalukya dynasty of Gujarat. This marriage is described in Hemachandra's 'Dvashtrayakavya'. The King Karna founded the capital of Gujarat Karnavati which was later on named as Ahmedabad under the Gujarat Sultanate. After the death of King Karna, the Queen Minaldevi carried on the Government of Gujarat during the minority of her son Siddharaja Jayasinha (1094 to 1143 A.D.). We learn from 'Prabhandachintamani' that she stopped the tax collected from the pilgrims of Somanath, which amounted to Rs. 72 lakhs. She is still remembered in Gujarat for her charity.[3]

Jayakeshi developed the city of Gopakapattana as the capital of his kingdom. Degamve inscription of Shivachittadeva (A.D. 1974) has given the description of its splendour that "the streets of his capital were completely filled with the palanquins of his Pandits, constantly passing the poles of which were covered with jewels, and inside which were quivering the golden earrings (of their owners).[4]

The Panjanakhani stone inscription of 1054 deals with one Annayya who is styled as *Dharma-mantri* of Panjanakhani modern Panaji. He is stated as meditating at the feet of *Biravarammadeva*, the elder brother of Jayakeshi. Annayya is also described as *Biravarammadeva's* coat mail and as the exemplary servant of Jayakeshideva. He said to have caused the forces of *Annalladeva* who was the chief servant of *Arakayya* to be scattered in all directions. Annayya is further described as having destroyed the western rulers.

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[1] *Kadamba Kula*, p. 401.
[2] JBBRAS IX, p. 282.
[3] Majumdar M. R., *Cultural History of Gujarat*, p. 99 ff.
[4] JBBRAS IX, p. 273.

Jayakeshi I is known to have conquered Alupas and Shilaharas. The inscription refers to the city of Chandrapur.[1] The grant of Jayakeshi I, dated saka 975/A.D. 1073, records grants of certain taxes to the Mosque—*Mijigidi* in the Gopaka founded by his Arab Minister Chhaddama for its maintenance. The contribution was to be collected by levying taxes from the merchant ships coming to Gopakapattana from different parts of the country and outside places at the rates laid down in the grant, in coins *Gadyanaka* and *Drams* according to the size and type of the boat or ship and the country from where it came. Panaji plates of saka 981/A.D. 1059, records grant of village Laghumorimbika to his Arab Minister Chhaddama.

Guhalladeva III (A.D. 1081 to 1125) :

Guhalladeva III succeeded Jayakeshi I by about A.D. 1081. While most of the records of the Goa Kadambas, which give geneological accounts omit his name, and mention only Vijayaditya as the son of Jayakeshi I, the Narendra inscription of A.D. 1125 only states specifically that he was the elder son of Jayakeshi I, Vijayaditya the father of Jayakeshi II the younger. *Alnavara* stone inscription of saka 1003/A.D. 1081-82 provides him the earliest known date for his reign and also refers to him as a son of Jayakeshi I (*Shrimat-Jayakeshidevara-tat-putra*). The latest known date of his reign is furnished by his Mugad stone inscription of A.D. 1125.[2] According to Alnavara records at the beginning of his reign in A.D. 1081, his kingdom consisted of Konkan-900, Palasige-12000, Kundur-500, Unkal-30, Sabbi-30, Haive-500, Utsugrame-30, Kadaravalli-30, Kontakulli-30 and Kavadidvipa-savalaksha.[3] Tegur (Dharwad) inscription describes him as Mahamandaleshwar and he was ruling in saka 1004/A.D. 1082 over Konkan-900 and Palasige-12000.[4]

In the copperplate inscription of Tribhuvanamalla saka 1021/A.D. 1099 of which only Portuguese translation of A.D. 1727 is available he is also referred to as *Gohallo Deo*. It records grant of 19 *Nishkas* to God Nageshvar of Priol (Ponda). Nagadevarya who was an expert in sculptures was the donee.[5] The Mugad stone inscriptions (A.D. 1125) also describes him as Guhalla Deva-Tribhuvanamalla.

As is known from his Madakai Honnalli (in Kalaghatagi-Dharwad) of saka 1018/A.D. 1096 he seems to have assumed the title of Shivachitta-Permadi.[6] Kadaroli (Sampagaon) record furnishes him the date

[1] E. I. XXXVIII, p. 285 ff.
[2] Mugad inscriptions SII, XI, Nos. 177, 211.
[3] Alnavara inscription, SII, XV, No. 225.
[4] SII XI, pt. ii, p. 206.
[5] O. P. 22, pp. 400-404, Goa Archives, *Moncoes* No. 97 ff. 560.
[6] E. I. XXX, p. 74 n.

of saka 1021 (current)/A.D. 1098. It is issued from his Palasige capital, or Halshi (Khanapur). It states that he obtained his glory by the favour of Goddess Padmavati. He styles himself as *Gopakapura-vardhishva* i.e. lord of Gopaka the best of the towns. He is the first Kadamba king to assume this title.[1]

According to the Kharepatana plates of Shilahara king Anantadeva, he seems to have lost the Kavadidvipa during his fight with Anantadeva of Thana shilharas before A.D. 1095. However he continued to hold Konkan-900.[2]

The king Tribhuvanamalla Kadamba referred to in the Gopaka grant of Kelivarma dated saka 1028/A.D. 1106 will have to be thus identified with Guhalladeva himself. It refers to the establishment of Brahmapuri of 12 Brahmin families and image of Goddess Sarasvati in Gopaka the capital of the kingdom by kelivarma officers of the kadamba king Tribhuvanamalla who hailed from Panjanakhani i.e. modern Panaji.[3]

Malakanakoppa stone inscription of saka 1026/A.D. 1103 states that while Guhalladeva *Mahamandaleshwar, Banavasipura varadhishva* was reigning, Bommisetti constructed a *basadi* at Malakanakoppa. The nigadi (Dharwad) Stone inscription records his grant of land to a *matha* or monastery, while he was ruling over Konkanamandala from his capital at *Gove*. It is dated saka 1033/A.D. 1111. From the various records cited above, it will be seen that Guhalladeva continued to rule as a Mahamandaleshvar of the Chalukyas till A.D. 1125. He was a pious ruler and made grants to monasteries, established Agraharas or centre of Vaidic learning, though during his regime the Kadambas seem to have lost their supremacy over the Thana Shilaharas.

Vijayaditya I (c., 1081 to 1104 A.D.) was the younger brother of Guhalladeva III. He might have shared power with Guhalladeva as was done by his grandsons Shivachitta and Vijayaditya. He might have helped his elder brother in recovering some part of North Konkan conquered by Anantadeva and he is therefore described "as torch for the jewels of the land of Konkana".[4] He was married to Chattaladevi.[1] He might have met with premature death and his son Jayakeshi II seems to have joined his uncle Guhalladeva in ruling the Kadamba kingdom from A.D. 1104.

Jayakeshi II (c., 1104 to 1147-48 A.D.)

It is seen from the stone inscriptions at Dharwad, that the 43rd regnal year of the reign of Jayakeshi II corresponded to A.D. 1146-47

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[1] B. G. I, pt. ii, p. 568.
[2] Kharepatana plates, I. A. IX, pp. 33 ff.
[3] SMHD IV, pp. 45-47; E. I. XXX, 71-78.
[4] JBBRAS XI, p. 273.

and thus he might have been ruling as a Yuvaraja from the A.D. 1104 jointly with his uncle Guhalladeva III till the latter's death in A.D. 1125.[1] Sewell has placed him between saka 1041-1069/A.D. 1119-1147, which appears to be more correct as the above decipherment of the fragmentary Dharwad Stone inscription is not without doubt. His last regnal year (A.D. 1147) cannot be pushed forward as his son Shivachitta is known definitely ruling from saka 1069 (A.D. 1147-48).[2]

The Golihalli stone inscription of his son Shivachitta dated A.D. 1160 which gives him the high sounding title *Konkan Chakravarti* or lord of the Konkan[3] states that he aimed at a high position from the beginning of his reign. His suzerain Chalukya emperor Vikramaditya, had gone old and his powerful feudatory Hoyasala Vishnuvardhana challenged his supremacy and carried on a campaign against him from A.D. 1117. Jayakeshi II made the best use of the situation and seems to have declared himself independent and assumed the title of *Konkan Chakravarti*. Kolhapur Shilaharas and some other feudatories also seemed to have joined with him in his campaign against the Chalukya emperor. Vishnuvardhana suffered great defeat at the hands of the Sinda Achugi II, a feudatory of Vikramaditya VI and recognised the Chalukya supremacy by A.D. 1122. Achugi II marched from his capital Yelburga, took Goa and giving it to the flames, seized Konkan.[4] His differences with the Chalukyas were however soon settled permanently and Vikramaditya VI offered him in marriage his daughter Mailaladevi[5] His marital relation with his overlord, the Chalukya emperor Vikramaditya is described with high praise for him, "the lord of the earth bestowed his daughter upon the crest jewel of princes".[6] About A.D. 1133 he seems to have been defeated by Vishnuvardhana Hoysala who had held his Halshi province sometime.[7]

Hostilities seem to have broken out at the beginning of his reign with the king Aparaditya I (1110-1140) of the Thana Shilaharas. The Narendra Inscription (A.D 1125-26) describes him as governing Kavadidvipa-Savalakha.[8] The Shilahara prince Aparaditya I was reduced to great straits. His Vadavali inscription describes this calamity graphically, "a demon named Chittuka invaded the kingdom and feudatories sided with him. Dharma was lost and elders were oppressed, the subjects became exhausted and the country's prosperity was at the end, still undaunted Aparaditya single-handed rushed to the battle on

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[1] Dharwar inscription, *Kadamba Kula*, p. 403.
[2] JNSI XXVII, p. 63.
[3] JBBRAS IX, p. 300.
[4] JBBRAS XI, p. 269, B. G. I, pt. ii, p. 574.
[5] JBBRAS IX, pp. 245, 273, 283, 285, 300 and I. A. XIV, p. 288.
[6] E. I. XIII, p. 311.
[7] B. G. I, pt. ii, p. 569.
[8] E. I. XIII, pp. 306-323.

horseback relying on his power of arms and sword. Then the enemy knew not whether to fight or to flee. He took shelter with the Mlencchas".[1] Vijayaditya the son of Gandaraditya Shilahara (1110-1140 A.D.) of Kolhapur house seems to have assisted Aparaditya in his fight against the Kadambas as directed by his father, and Vijayaditya claims in his records that he reinstated the deposed King of Shtanaka, which must have been Aparaditya I.[2] It seems Aparaditya recovered his lost territory of Konkan by A.D. 1127 as he is said to have ruling over entire Konkan when he issued his Vadavali plates.[2]

The power of the Kadambas reached its zenith under Jayakeshi II and his kingdom extended in A.D. 1125-26 over Konkan-900, Palasige 12000, (Present Khanapur Chikodi, Sampagaon talukas of Belgaon district), Unkal-30, Shabi-30 (part of Dharwad and Hubli talukas). Kontkulli-30, Hangal-500, Utsugrame and Kadaravall-30, Palagunde-30, Velugrame-70 (present Belgaun), Haive-500 (part of N. Kanara) and Kavadidvipa-Savalakha.[3] With such extensive territoral acquisitions from Thana in the north to North Kanara in the south, Jayakeshi seems to have declared himself independent after the death of Chalukya emperor Vikramaditya VI. But Someshvara III (A.D. 1127-1137) his successor, directed his feudatory Sinda Permadi I of Yelburga, the son of Achugi II to put down the revolt of Jayakeshi II and he seems to have subdued Jayakeshi and made him to accept the Chalukya supremacy.[4]

Jayakeshi was an aggressive ruler and good administrator. He governed the vast kingdom assisted by his ministers and generals (dandanayakas), who were in the service of Chalukya emperor Vikramaditya VI. Peace and prosperity prevailed in the country. The record at Narendra (A.D. 1125) makes special mention of high officer *Lakhmanaraja*. He was the minister and dandanayaka under Vikramaditya VI and was given on commission to the household of his daughter Mailaladevi, the queen of Jayakeshi II. He had four sons Bhavaraja, Soma, Lakshmana and Singharasa (or Simha). Another record at Narendra describes the exploits of Dandanayaka, Lakshmana, "that he crossed over Sahya mountain, drank up the ocean, eradicated the wicked and settled the country, the glorious Konkan that has become free from dangers".[5] His son Soma was conversant with grammar, science of logic and politics. His younger brother was also

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[1] JBBRAS XXI, pp. 505 ff.
[2] *Transactions of Literary Society of Bombay*, Vol. III, pp. 4-5; B. G. I, pt. ii, pp. 274, 282 and 283.
[3] Narendra Inscription-B-E. I. XIII, pp. 316-326.
[4] JBBRAS XI, p. 244.
[5] E. I. XIII, p. 234.

a great dandanayaka of Jayakeshi. He is described in the record as a "skillful man, an ornament of the generals".[1]

Asoge copperplate records grant made by Jayakeshi II to the priest Shivashakti of God Galgeshwar at Baloge near Khanapur in saka 1055/A.D. 1133 for the maintenance of the temple.[2] A stone inscription at Dharwad dated in the 43rd regnal year of Jayakeshi (A.D. 1146-47) records consecration of image of goddess Mahalakshmi at the Agrahara Huppavalli by physicians Ketti Setti and Sasan Setti of a share of the town income for *Nandadipa* of the Goddess.[3] Simha, the younger brother of Soma is represented in the records as a great minister and also eminent scholar.

Shivachittapermadideva (c., 1147 to 1181), succeeded Jayakeshi II in the year Kaliyuga 4248/saka 1069 Prabhavasamvatsara/A.D. 1147-48. He was the son of Jayakeshi's wife Mailalamahadevi and his name was Perma, Permanadi, Permadi Hemadideva and had the title Shivachitta which was acquired by him later on which shows that he was a devotee of God Shiva.[4] He was married to Kamaladevi. In one record, her father is named as Kamadeva of Somanamesha or Lunar race and her mother, Chattaladevi of the Pandya family,[5] in another, Chattaladevi is allotted to the Lunar race and Kamadeva to Suryavamsha or solar race.[6]

Kamaladevi was a lover of arts and learning. The temple of Kamalanarayana and Mahalakshmi at Degamve (Sampagaon) was constructed at her encouragement and is considered the best specimen of the architecture of structural stone temples of the Goa Kadambas. It contains three inscriptions. The main *Sutradharin* (architect) of the temple was one Tippoja, the mason of God Bankeshwara and his son by name Bagoja and also the son of Sutradharin Haloja of Buvin-bage assisted him in the work of the construction of the temple.[7] Havinabage may be Rayabag from Kolhapur. Kamaladevi was very much interested in the spread of learning amongst her subjects. She invited learned Brahmins from different parts of the country and founded centres of learning by making them grants of lands and *Agraharas*. The Brahmins holding Agraharas imparted instruction in Veda, Dharmashastra, Vedanta, Sahitya and Nitishastra etc. and also Itihas or traditional knowledge of history.[8]

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[1] E.I, XIII, p. 312.
[2] SMHD I, p. 26.
[3] *Kadamba Kula*, p. 401.
[4] B. G. Vol. XXI, p. 359; JBBRAS IX, p.245.
[5] JBBRAS IX, p. 274.
[6] *ibid*, p. 295.
[7] *ibid*, p. 294.
[8] *ibid*, pp. 266, 287.

Vijayaditya II, the younger brother of Permadi, assisted his elder brother in the government of the kingdom of Yuvaraja and both of them were ruling jointly from the very beginning of the reign of Permadi (A.D. 1147) as is learnt from the inscription at Siddapur (Sampagaon) of saka 1080/A.D. 1158. It is the earliest known inscription of Permadi's reign. It records the grant of land to God Prabhalinga by the people of the village.[1] Most of the records of this period are in Kannada or Nagari scripts and in many cases they are in Sanskrit language. Some of them are also in both the scripts.[2] The second part of the inscription in the Nrishimha temple at Halshi (Khanapur taluka) dated Kaliyuga Samvatsara 4270 named *Kharasamvatsara* correctly 4272/saka 1093/A.D. 1171-72 records the grant of *Tribhoga rights* of the village Bhalaka from Kalagiri Kampan and Palasi Vishaya to God Shri Nrisimha for *Ashtopacharas* of the God made by Vijayaditya conjointly with Permadideva. It was the 25th year of their reign and perfectly tallies with the initial date of their reign A.D. 1147. The first part of the said inscription records grant made by Permadideva in his 23rd regnal i.e. K. Y. 4270, virodhi/A.D. 1169/70. The Tribhoga rights of the village Sindavalli from Palasika Vishaya were donated to Raja Purohit Vindhyavasi Matayogi for the Panchopachara worship of God Nrisimha, while he was ruling at Gopakapattana. The inscription at Degamve (Sampagaon) dated K. Y. 4275 Jaya/saka 1096/A.D. 1174, the 28th year of the reign of Shivachitta Permadi, records the grant of village Degamve to 30 Brahmin families of different Gotras made by his Queen Consort Kamaladevi in the presence of God Saptakoteshvar and while residing at Gopakapuri.

His earliest record at Golihalli (Khanapur) contains three dates and details three grants made by him. The grant of the 14th regnal year, dated saka 1083 current-Vikrama/A.D. 1160-61 was made by his Dandanayaka Bhavayya to Shrotriya a learned Brahmin for repairs and maintenance of the temple and *Matha* and Nandadipa of God Nammeshvar of Kirusampagadi. The details of the land and betal plantation donated to God are stated in the grant. Shivachittadeva is stated as ruling from his capital at Gove and his kingdom consisted of Konkan-900 and Palasige-12000 and Velugrama-70. The second grant pertains to his 17th regnal year, saka 1086, Swayambhu/A.D. 1163-64. It is made to a brahmin Shaktideva of Shrotriya of God Nammeshwar by merchants Priyagobhuru village people of Kunilagere and other six villages, 36 travelling merchants, best traders and basket makers, sixty cultivators, for the supply of food etc. ascetics. The

[1] I. A. XI, p. 273.
[2] JBBRAS IX, p. 282.

third record of his 26th regnal year i.e. saka 1195 Nandana/A.D. 1173 tells us that merchants of 4 towns constituting Kirusampagadi donated toll taxes of those towns free of all government diminutions to God Nammeshvar for their merit.

Permadideva was the feudatory of the Chalukyas and remained loyal to them till their downfall by about A.D. 1156. He assumed the title of Malavaramari or Malaharamari i.e. the slayer of the Malavas or Sahyadri tribes which corresponds to 'Malaparalganda' of the Hoysalas. Velugrama-70 which was seized from the Shindas during the reign of Jayakeshi II in spite of the efforts made by the Shindas seem to have continued with Permadi, and for this reason he assumed the title of Malavaramari[1] and thus it refers to the subjugation of the hilly province of Velugrama-70. This title is noticed on his coins along with the name of the family deity *Shri Sapta Koteshvara.* The coins of Jayakeshi I carry the title of Malage Bhairva which also has got the same meaning. It may be connected with folk deity *Malhari* or Khandoba also.

On the suppression of the Chalukya dynasty, Permadideva seems to have declared himself as an independent monarch and styled himself as Konkana Chakravarti or Emperor of Konkan. The Kalachuris who succeeded the Chalukyas could not pay their attention to the Goa Kadambas as they were engaged in the consolidation of their power by reducing the Santaras and Hamgal or Banavasi Kadambas and the Hoysalas who were trying to establish themselves as supreme power in the Deccan. Permadi died without any issue and his brother Vijayaditya II succeeded him in about A.D. 1180.

It will be seen from the grants made by him and his brother and also Queen Kamaladevi that he looked after the welfare of his subjects and the country seems to have prospered under him. His gold coins saka 1072 Pramoda/A.D. 1150-51; saka 1078-79 Ishvara-Dhata/A.D 1156-57; saka 1083 Vrisha/A.D. 1161 and saka 1096 Jaya/A.D. 1174 also indicate that trade and commerce must have flourished during his reign.[2]

Vijayaditya II (c., 1180-1188 A.D.) succeeded Shivachittadeva. As already seen before, he was associated as *Yuvaraja* from the very beginning of the reign of Shivachitta in A.D. 1146-47. He was also known as Vijayarka. He acquired the name Vishnuchitta by his devotion to God Vishnu. It is said that by the favour of lord of Gokanrna (a town on the sea coast below Karwar) he became known as Vanibhushana or Saraswatibhushana.[3] He was married to Pattamahadevi

[1] JBBRAS IX, p. 300.
[2] JNSI XXVII, p. 62; *Maharashtrachi Chara Daivate* p. 143; *Mandvi-Marathi Journal* p. 23, March 1965; *Gomantakachi Sanskritika Ghadana* p. 157.
[3] JBBRAS IX, p. 245.

His other wife was known as Lakshmidevi.[1] The latest known grant of Shivachitta belongs to his 28th regnal year and is dated A.D. 1175.[2] The earliest known date about Vijayaditya's independent rule is saka 1102 Vikari, Kartik Su. 12 Sunday/A.D. 1179 Sunday October 14.[3] It seems he had to submit before the forces of Kalachuris Sankama II in about A.D. 1177.[4] Another attempt at the subjugation of the Goa Kadambas was made by Kalachuri king Ahanamulla brother of Sankama who succeeded him in 1811. He deputed his Dandanayaka Chandugideva who is said to have burnt the territories of the King Vishnuchitta of Goa in A.D. 1181-82,[5] but it is not certain whether Vijayaditya accepted the supremacy of the Kalachuris. The Hoysalas renewed their conflict with the Kalachuris in 1181, as a result, the former had to stop his war with the Goa Kadambas. After the suppression of the Kalachuris by the Hoysalas, the Kadambas became feudatory of the latter and the king Vira Ballal levied tribute from the Kadambas.[6] But soon again struggle started between the Hoysalas and Yadavas for the supremacy of the Deccan. The Hangal Kadamba Kamadeva took advantage of the unsettled political conditions and marched against the Goa Kadambas and subdued Vijayaditya to accept his overlordship.[7] The power of the Goa Kadambas was considerably weakened by the end of the reign of Vijayaditya II in A.D 1188.

Jayakeshi III (c., 1186-87 to 1216 A.D.) his son succeeded Vijayarka. His earliest date is mentioned in the stone inscription from Prince of Wales Museum at Bombay. It is dated the 12th year of his reign, Kaliyuga 4288 (commencing) Kalayuka *Samvatsara*/saka 1087/A.D 1185-86. It records the grant of a piece of land measuring 8 *mattaras* situated to the west of Unkal village and south of Brahmapuri at Elya from Halasige-Nad to God Shrinigeshvar by the Mahajans of the place. Another piece of land measuring 26 hands long and 21 hands broad was donated in the precinct of the temple of God Shrinigeshvar for the construction of the school building. It was made with the consent of Kuriba Shrinigas or basket-makers guild of Navilur in Chahugaon. Virajayakeshi is described in this record as *Banavasipuravaradhishvar* i.e. supreme lord of Banavasi, the best of towns; *Samadhigata Panchamahashabda* i.e. heralded in public by five great musical instruments. He is further referred to as *Mahamandaleshwar* the great feudatory and was ruling at Gove capital of Konkan-900 and

[1] JBBRAS IX, pp. 45-46: B. G. I, pt. ii, p. 569.
[2] Degamve inscription JBBRAS IX, pp. 266, 272.
[3] E. I. XXIX, pp. 29-30.
[4] *The Struggle for Empire*, V, p. 181.
[5] B. G. I, pt. ii, p. 489.
[6] Rice, *Mysore Inscription*, p. 117.
[7] B. G. I, pt. ii, p. 563.

Palasige-12000.[1] This inscription was recorded in the 12th year of his reign which means he must have been governing as Yuvaraja from A.D. 1173-74, during the regime of his father Vijayaditya. He is specially referred as *Banavasipuravardhishvara* and thus he must have settled down his dispute with the Hangal branch of the Kadambas as soon as he came to the throne in A.D. 1185-86, at the mediation of the Chalukya king Someshvar IV (c., 1181-1189) who is said to have taken shelter with Jayakeshi III after the suppression of the Chalukya supremacy by Yadava Bhillama in 1189. Jayakeshi seems to have recognised his overlordship. The copperplate grant of his 13th regnal year from Kirihalasinge near Khanapur is dated Kaliyuga 4288 (expired) Sidharthi/A.D. 1186-87. It records consecration of the image of God Varabhadeva at Palashi ; the village Kirihalasige was donated to God for its worship. Jayakeshi is described as 'Saptakotishvaralabdhavaraprasada' that is, 'who was prosperous due to the favour of God Saptakotisha'.

The stone inscription of Managundi (Dharwad taluka) dated Kaliyuga 4289/cyclic year Bundubhi/c., 1188-89 A.D. records grant of 6 *mattaras* of land of Managunda by Chavunda Gavunda to preceptor Chandrabhushanadeva of Jayakeshi. It refers to Jayakeshi as Konkan Chakravartior supreme lord of Konkana.[2] He had also assumed the title of Shri Permadi.[3] The copperplate grant of his 22nd regnal year dated saka 1131/A.D. 1209 is the latest known record of his period.[4] Fleet has described two gold coins as belonging to his reign of saka Samvat Pingala 1120/A.D. 1199-1200 and of Pramoda 1133/A.D. 1210-11.[5] A.D. 1211-12 appears to be the last known year of his reign.

His stone inscription at Kittur (Sampagaon) dated 15th regnal year saka 1110/A.D. 1188-89 gives interesting account of trial by ordeal by fire *phala-divya*. It states that there was a dispute regarding the ownership of a field between Shivshakti, the *Acharya* or priest of the God Kalleshvardev of Kittur, and Kalyanshakti the *Acharya* of the Mulsthandev or village God, the two parties met in the presence of his minister and commandant or *Dandanayaka* Ishvar, and agreed to put their claims to the test of the Phaladivya or red-hot piece of plough. On Sunday, the dark seventh of *Ashadh* (June-July) the claimants met in the presence of the principal villagers of Degamve, at the temple of the God Mallikarjun. Kalyanshakti declared that the field belonged to the *Mulsthandev* or village God, while Shivshakti, holding a red-hot piece of plough in his hand, stated on oath that the

[1] *Kadamba Kula*, III, No. 23.
[2] *Ibid*, No. 5, p. 415.
[3] A. R. S. I. E. 1939 to 1942, p. 282.
[4] *Ibid*,.
[5] JBBRAS X, app. p. XXIV.

field belonged to the God Kalleshvar. Next day, the leading villagers examined Shivshakti's hand and finding it unharmed, decided that the field in dispute belonged to his God Kalleshvar. During his reign by A.D. 1208 the Kadambas seems to have lost their district of Velugrama-70 i.e. present Belgaon taluka to Rattas.[1]

It seems from the Mangundi inscription referred to above that the son of Jayakeshi III by name Viravajradeva was ruling conjointly with his father in A.D. 1202 and that it was the 9th year of his reign. It seems thus that Vajradeva was associated in the rule by his father as Yuvaraja from A.D. 1193. A stone inscription in the fort Dodvad (Sampagaon) states that Vijayasahani, son of Rayasahani who was *dimgariga* of Vajradeva died in a fierce battle. It appears that he died early, before his father and as Jayakeshi III had left no issue behind him, his brother Tribhuvanamalla seems to have succeeded him to the throne in about A.D. 1216.

Tribhuvanamalla *alias* Sovideva (1212-1238 A.D.) succeeded Jayakeshi III. We know from the Bandora-Gadivere plates of his son Shashthadeva III that his wife was known as Manikyadevi. There are two gold coins in the name of King Sovideva. One of them is dated in the cyclic year *Bahudhanya Samvatsara* which corresponds to saka 1140/A.D. 1218-19 and probably coincides with the reign of Tribhuvanamalla.[2] There is another gold coin of Sovideva of *Vishvavasu Samvatsara*/saka 1167/A.D. 1245. It reads as *Shri Saptakoteshacharana Labdhavaravira Sovideva* i.e. "Sovideva who has attained prosperity by the favour of God Saptakotesha". On the reverse of the coin the cyclic year is engraved in the raised palm of the foot of the lion passant to the left[3] which was the royal symbol of the Goa Kadambas. Thus it appears that Tribhuvanamalla's name was Sovideva. His title Tribhuvanamalla, the wrestler of three worlds shows that he must have ruled independently till A.D. 1245, though the Yadavas had established firmly as the supreme power of the Deccan. The Yadava inscription at Hasalapalli also states that "Kadambas were glorious in the Konkan".[4]

The Goa plate of his son Shashthadeva states that his daughter was married to one Kavana or Kamadeva.[5] The gold coins described above indicate that the trade of the country must have flourished under him and his subjects must have been happy and prosperous.

Yadavas and Kadambas

The emperor Singhana II (1209-1247) greatly extended the Yadava empire. He moved his capital at Devagiri. His records state that the

[1] B. G. I, pt. ii, p. 556.
[2] Eliot, *Coins of Southern India*, pt. II, no. 68-69.
[3] JNSI XXVII, p. 63.
[4] JBBRAS XV, p. 384.
[5] I. A. XIV, p. 288.

Devagiri controlled 84 fortresses. The Yadavas of Devagiri had the hereditary title of "*Dvaravatipuravaradhishva*" i.e. "supreme lord of Dvarka the best of the cities". They carried the *suvarnagarudadvaja*, a banner of the golden eagle. It appears on the seals of their charters and in conjunction with the representation of *Hanuman* or monkey God. Singhana governed his empire through some of the feudatories but mostly by appointing his own high officers (Dandanayakas and Mahapradhans in charge of provinces. His Mahapradhana, Maindeva-pandit who is described as Mahaparamavishvasin, was governing Banavasi 12000 in A.D. 1215 and a certain Hemmeyanayaka was his *shulkadhikarin* i.e. Treasurer. He himself was ruling Halasige 12000 in A.D. 1226 and thus the Kadamba Tribhuvanamalla might have accepted by this time suzerainty of the Yadavas and also lost his province of Halasige to the Yadavas. Singhana's victory for the southern provinces was known as Dandanayaka Vichhana. His subordinate was Mahamandaleshvar Joyideva II of the Gutta family in A.D. 1238.[1] We learn from his Khedarpur and Kolhapur inscriptions of A.D. 1213 and 1218-19 respectively that the Shilahara king Bhoja II of Kolhapur was already defeated and his territory was annexed to Yadava empire in A.D. 1218-19. The record further states that his viceroy for the southern provinces Vichchana had already reduced to obedience the Rattas of Saundatti and the Kadambas of Goa.[2]

During the southern campaign of Dandanayaka Vichchana Tribhuvanamalla Kadamba of Goa seems to have lost his kingdom about 1220 A.D. From the Kasarpale plates we learn that for about 12 years Tribhuvanamalla's kingdom was ruled by the Yadavas and only after the interference of Mayindev Pandit, who was vested by Singhana with supreme powers as regards his southern acquisitions, that Tribhuvanamalla was again reinstated as Goa Kadamba king. As already seen before Mayindev was personally in charge of Palasige 12000 from 1226 A.D. We learn from the Kasarpale plates that his ancestors prospered under the patronage of the Kadambas. It is therefore possible that during his Government of Palasige he might have restored Tribhuvanamalla to his own throne because of his respect for the royal family of the Goa Kadambas. Vichchana subdued the Hangal Kadamba king Malindev by the conquest of his second capital Gutti during 1231-1239.[3]

Shashthadeva III (A.D. 124?-1264) succeeded Tribhuvanamalla in about A.D. 1247. His succession to the throne of the Kadambas does not seem to have been acceded to by the Yadavas during the reign of

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[1] B.G. I, pt. ii, p. 523.
[2] JBBRAS XV, p. 38?
[3] E.C. VII Sb 221; M.A.R. 1923. p. 121, No. 125.

Singhana (A.D. 1209-1247). We learn from the Goa plates of Shashthadeva that he had to make efforts to regain his lost position and that his brother-in-law Kamadev helped him in coming to the throne by about 1247 A.D.[1] Kamadev is referred to in the same records as King Kama or Kanava, the son of Lakshmideva and Lakshmi, whose wife was a sister of King Shashthadeva. He is described as establisher of Shashtha. The King Kamadev is said to have attained fortune by worshipping the God Mallinatha and Shashthadeva is said to have attained the favour of the God Saptakoteshvar. On his accession to the throne, he gave donation of a rice field named 'Kinjalagua' near the temple of Murtinarayan to his family preceptor Vishnusharma Dikshit of Gargya Gotra. The rice field was situated in the village Sulibhatti to the north of Govapuri where the presiding God is Goveshwar. The charter was issued in the name of Goveshwar. The Goa plate is dated *Sadharana Samvatsara* i.e. saka 1173/A.D. 1250 and it is cited as the fifth year of his reign and fixes Kaliyuga 4348 (current)/saka 1169/A.D. 1246-47 as the first year of his reign.

The second recod of Shashthadeva is contained in a stone inscription at Bhurdasingi in Hubli taluka (Dharwad). It furnishes for him the date saka 1179 (expired)/A.D. 1257, April-May. The record mentions him as *Mahamandaleshvar* and also as lord of the western ocean. It clearly indicates that inspite of his feudatory title Mahamandaleshvar, he was ruling as an independent monarch. The village Bhurdasingi is situated in the Hangal-Banavasi province and his jurisdiction thus seems to have been extended to Hangal province in 1257 A.D. which was hereditary district of Hangal Kadambas, which branch of the Kadambas had lapsed in 1253.[2]

There is another grant of the king Shashthadeva III contained in his Bandora (Goa) Gadivare copperplate dated Kaliyuga 4357 *Durmati*/ saka 1184/A.D. 1262. It records grant made by Shashthadeva in the presence of God Mahabaleshvara of Gokarna of a village Gadivare from Ajjagove Kampana of Panasadesha or Halshi vishaya, for the prosperity of the kingdom. The donees were Lakshmidhara and his brothers, who were the sons of Jyotisha Lokanarayana and his wife Sridevi and the grandsons of Daivajna Narayana and his wife Kamala and they belonged to the Atreya gotra. Among the privileges with the gift were *nidhi* (treasure trove), *nikshepa* (deposits), *danda* (fine), *aputrika* (property of the childless), *sulka* (tolls), *kara* (major tax) and *upakara* (minor tax). Of these *nidhi* and *nikshepa* are usually included in what is called *ashta-bhoga* enjoyment while *danda* and *dosha* are included in the *das-aparadha*, 'ten crimes'. The gift was free from all

[1] I.A. XIV, p. 285.
[2] B.G. I, pt. ii, p. 572.

imposts and it was enjoined. The record was composed by Padmanabha, the son of Chatyanarya and the grandson of Somanath who was a learned person, while Goa plates referred to above were composed by Somanatha's son Chatyanarya. The record was engraved at the King's command by Dhannaya, the son of Ruppala Shrithin.[1] His gold coin gives him the date of *Plavanga Samvatsara*/saka 1170 (current)/A.D. 1247-48. Its weight is about 68 grains or 4·5 gms. His name Shivachitta is repeated thrice on one side of the coin in Nagari script with two impressions of the same in old Kannada script in between.[2] In his latest copperplate record at Bandora-Goa, Gadivare also, he is described as *Paschimasamudradhisha* i.e. lord of the western ocean and the trade and commerce must have flourished during his reign.

The latest known date of Shashthadeva III is recorded in his stone inscription at Bankapur (Dharwad), dated Kaliyuga 4359 (Kalayukta 9) corresponding to c., 1263-64 A.D.[3] Bankapur formed part of the Hangal Banavasi district of Hangal Kadamdas and it seems after the lapse of that Kadamba house in A.D. 1253, the said province might have come into the possession of the Goa Kadambas. It is not known for how long Shashthadeva III continued to rule his kingdom after A.D. 1264. We also do not know whether he was succeeded by his brother-in-law Kamabhupal, as he could not leave any issue behind him.

While Shashthadeva III was ruling at Goa, Chamundaraja, the son of the Ratta conqueror Vichchana was ruling the southern parts of the empire as Mahapradhana of Krishna Yadava (A.D. 1247-60).[4] Emperor Mahadeva succeeded Krishna in A.D. 1260. He followed vigorously the policy of the subjugation of the feudatories of the Chalukyas. Somadeva the last prince of the Thana Shilaharas lost his life in the naval battle (A.D. 1270), and his territories were annexed to Yadava empire.[5] Emperor Ramchandra succeeded Mahadeva in A.D. 1271. Achyuta, Krishna and Jaideva Gutta ruled in Konkan in succession, during his reign.[6] Saluva Tikkammadeva was his *Mahamandaleshvara* and *Maneya-Samantasainyadhipati* or commander of household troops. The Harihara inscription described him as an establisher of the Kadamba king and plunderer of the Hoysala king and states that in March-April 1277 he had come to Harihara on the way back from a victorious expedition in which he reduced the Hoysalas of

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[1] E.I. XXXIV, p. 106.
[2] JBHS IV, no. 2, p. 20.
[3] B.K. No. 6 of 1943-44 of A.R. Ep., App. F; E.I. XXXIV, p. 106.
[4] B.G. I, pt. ii, p. 526.
[5] *Ibid.*, p. 467.
[6] *Ibid.*, p. 529.

Dorasamudra.[1] The Hangal house of the Kadambas lapsed in A.D. 1253. The Goa Kadamba King Shashthadeva had no issue and also might have died by that time, and the Kadamba king whom the Tikkama established at Banavasi, the original place of the Kadambas, might have been Kavadeva or Kavana Chalukya, the brother-in-law of Shashthadeva.

A certain Chalukya king named Kavadeva was ruling round about the Sawantwadi areas in A.D. 1261 as is seen from the Tervana grant of saka 1182/A.D. 1261.[2] He had all the titles of the Chalukyas of Kalyani and is described as *Mahamandaleshvara*. It is not known whether he was the descendant of the last Chalukya king Someshvar IV, who had taken shelter with the Goa Kadamba, Jayakeshi III after his defeat by the Yadavas in A.D. 1184. Another grant of Bopadeva Chalukya of saka 1181/A.D. 1259 is available. He was ruling from Sangameshvar (Ratnagiri district) and also had all the Birudas of the Kalyani Chalukyas. Bopadeva seems to be the title and his name also might have been Kavana.[3] Kamadeva Bhupal, the brother-in-law of Shashthadeva III is also described in the Goa plate of Shashthadeva III as *Kava* or *Kavana* and establisher of the Kadamba, Shashthadeva III[4] Kamabhupal might be thus identified with Chalukya Kavadeva of Tervana plate as a descendant of the Kalyani Chalukyas, the suzerain of Shashthadeva and hence his establisher.

A virgal dated A.D. 1270 states that the Mahamandaleshvar Virkavadevarasa was ruling a settled kingdom.[5] The Kavadeva is also seen using the titles of *Kalyanapuravaradhishvara* of his former feudatory lord of Kalyani.[6] The Kadambas seem to have been re-established by the Yadavas only to check the aggressive policies of the Hoysala on the southern frontiers of the Yadavas.

In the manuscript of *Amarakosha* written at Suvarnadurga in the Konkan (Ratnagiri) Ramchandra is styled as *chakravarti* and he deserved the title as his rule was acknowledged over the whole of the Deccan, Konkan and Karnataka. There is literary mention of Ramachandra as the reigning king in the Dnyaneshvara's Marathi commentary in *Bhagavat Gita* completed in 1290-91 A.D. and another in the manuscript of *Namalinganushasana* of *Amrasinha*, the writing of which was finalised in June A.D. 1297. *Dnyaneshvari* also refers metaphorically to Ramachandra's reinstatement of the ancient kingdom of the Kadambas.[7] The donations given to God Vithal of Pandharpur

[1] B.G'I, pt. II, p. 530.
[2] Courtney and Auld, *Memoir on the Sawant Waree State*, p. 281.
[3] *Athalye Gharanyasha Ithas*, Vol. I, p. 11.
[4] I.A. XIV, p. 288 and 289.
[5] E.C. VIII, Sb, 190.
[6] *Ibid*, Sb, 302; Sa, 32.
[7] I.A. XXI, p. 51 and *Dnyaneshvari*, canto XVIII. 76-58.

by Lad and other families from Goa are recorded in the Stone Inscription of A.D. 1284 from Vithal Mandir at Pandharpur.

Goa Kadambas

Administration, Industries, Education and Culture (c., 1000-1300 A.D.).

Administration.—There are a few records of the period which throw light on the Kadamba system of administration. In general the Kadambas were feudatories of the Kalyani Chalukyas and later on of the Yadavas of Devagiri and used the title of *Mahamandaleshvara* or feudatory in their inscription. Though they were feudatories, they always enjoyed complete freedom in their internal administration. Jayakeshi I had assumed the Birude of Konkan Chakravarti or Lord of Konkan as early as A.D. 1052-53 in his Gudikatti Stone Inscription.[1] In his Old Goa Museum inscription he is described as *Padavalendra* (*Paschima-samudradhisvara*) or Lord of the western ocean[2] and thus the Kadambas also often ruled as independent monarchs of Gopaka. The kings married many wives. The senior one was known as *Pdttamaharadnyi.* Akkadevi, wife of Shashthadeva Kadamba is mentioned in several inscriptions of the Chalukyas and was a lady of considerable importance. She was called Gunad-vedangi—a marvel of fortune and *Ek-Vakye* or true to her words, and is further described as *Bhairavi* in battles and in destroying hostile king's[3] In Sawai-verem plate, her prowess is compared with the lustre of the sun. Mailaladevi, daughter of Chalukya king Vikramaditya VI was the wife of Jayakeshi II. She was a pious lady and made donation to temple at Narendra and thereby promoted the social welfare of the people as temples in those days were the main centres of social, religious and cultural activities. Kamaladevi, wife of Shivachitta Kadamba was a learned lady and established Brahmapuri at Degamve. Kamalanarayan temple at Degamve, which is the best specimen of the Kadamba architecture was constructed by her.

The supreme power of the Mahamandaleshvar was restricted only by the council of his Pradhanas or ministers. The *Mantrimandal* of Shashthadeva II was composed of *Chhadama Mukhya Swikarana* or the originator of the family; Shashthadeva II its president, Govind *Pratihastaka* or his deputy, three Mantris or ministers Shriyamai, Damapai and Madhava; *Mahalla* or steward Khentapai; *Sandhivi-grahaka* or minister for external affairs Bhallapai; *Rajapurohit* or Preceptor Govardhana.[4] They are described as Nayashila or knowing

[1] B.G. I, pt. ii, p. 567.
[2] E.I. XXXVII, p. 286.
[3] B.G. I, pt. ii, p. 435.
[4] SIM p. 58 Sawai-verem plate.

principles of polity. The ministers of Jayakeshi II were learned in Shastras, grammar, logic, polity and philosophy.[1] Sometimes an ordinary person of merit was also raised to the highest office in the state. An Arab Chhadama *Nauvittaka* owner of merchant ships, was appointed as Maha Pradhan by Jayakeshi I, setting aside all his ministers probably because of his experience in trade and navigation.[2]

The kingdom was divided into districts or Vishayas such as Tasa vishaya, which were further sub-divided into Desha like Antarya, Gopaka, etc. The district was also classified according to the number of dwelling in each of them Palasika or Halshi-12000, Konkan-900, Banavasi-12000, Velugrama-70, Haiva-500, Hangal-500. The district was headed by a Dandanayaka who was both civil and military head of the district. The village or Grama was the smallest administrative unit and Gaunda was the village headman. The Nagaras or cities had their own administrative organisation which was headed by Nagarapatas or Hanjamanapramukha or head of settlements of traders and artisans, etc. The state craft or Rajya is technically described as *Saptangam* or of seven elements in the inscription of Jayakeshi I of A.D. 1052-53.[3] which is keeping in with the concept of state described in Kautilya Arthashastra. Though there are no records stating the King's share of revenue it might have been one sixth of the total income of the land as laid down in Arthashastra. Other sources of government revenue indicated—*Kara,* major taxes; *Upakara,* minor taxes, *Shulka* tolls or customs; *Danda,* fines of punishments; *Dosha* torts and *Nidhi,* treasure trove. The rates of customs varied according to the nature of ships coming from overseas, from other ports on the coast and boats coming through rivers, etc.[4] i.e. from one suvarna or gold Gadiyana coin to 5, 2 or 1 silver Dramchs, respectively.

Commerce and Industry—The agriculture was the main occupation of the people. There was also a wealthy trading and industrial class among its inhabitants. Mention is often made in the inscription of a flourishing mercantile community that dealt in gold, silver, cotton cloth, victuals, paddy, pepper, fruits, oil, spices, camphor, perfumes, betel leaves, and other such articles. It is seen from the Goa plates of Jayakeshi I (A.D. 1053) that Gopakapattana, the Kadamba capital was one of the most important emporiums on the west coast. We learn from the charter that it was the resort of many traders (*vanijyas*) hailing from distant countries such as Pandiat, Kerala, Srytan (Sumatra), Bangala, Curger, Latta, Pusta, Saurashtra, Sangamesvar, Chippalona, Shivapur, Pindianna, Vallapatam, Simhalla, Cadah and Zangawar

[1] E.I. XIII, pp. 234-312.
[2] O.P., 22, p. 386.
[3] *ibid.*
[4] O.P., 22, p. 387.

(Zanzibar). These traders might have imported horses from Arabia, Persia and Afghanistan which was the important weapon of war. There are large number of hero stone found in Goa which depict war scenes of fighting with cavalry.

About the industries that flourished in the Kadamba dominions, it is seen from the records that most important were spinning, weaving, masonry, brass, carpentry, jewelry, iron works, basket making and the extraction of oil. A beautiful gold ear-ring was discovered at the site of the ancient capital of Goa, Chandrapur (Salcete).

The trade and industries were regulated by guilds (shrenis) of trading settlements like *Hanjamananagar*. Their heads, the Sethis are referred to in our inscription as giving donations of a share of the town income to Gods for worship. Bammnisethi of *Kareyagana* established at Malakonakoppa (Dharwad) *basadi* for *Samudaya* in A.D. 1103 during the reign of Guhalladeva III.[1] Ketisethi and Sasanasethi granted share of the income of the town, Huppavalli for consecration of Goddess Mahalakshmi during the reign of Jayakeshi II.[2]

It is evident from the records that the guilds served as local banks and treasury. Lakshmesvar inscription of Vikramaditya VI of the Western Chalukya family of Kalyani states that the guild of braziers was authorised to collect certain taxes from all classes of people and the time for their payment was fixed by the king.[3] The guilds were the centres of activity in the towns and they arranged for the feasts at religious functions and also probably made provision for plays and pageants for the entertainment of the citizens.

The commercial prosperity of Goa during this period is supported by the gold coins discovered at Chandor, Gopakapattana and other places. These include gold coins of Jayakeshi I (1050-1080 A.D.), Jayakeshi II (1107-1148 A.D.), Shivachitta (1148-1181 A.D.), Jayakeshi III (1188-1216 A.D.), Soideva (1212-1238 A.D.), etc. Some of these coins have got inscription of 'Saptakotishvaralabdhavara prasada', that is with the grace of God Saptakotisha who was the family deity of the Kadambas ; on the other side Kadamba crest 'lion' is often inscribed. They are referred to in records as 'Bhairava-Gadyanakas' or 'Saptakotisha-Gadyanakas'. They are of pure gold and their weight varies from 76 to 86 grains. Another variety known as 'Nishka' weighs about 65 grains. They are called as Bhairava Nishkas and the inscription *Malege Bhairava* or *Malaharimari* is found on them.

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[1] E.I. XXXVII, p. 308.
[2] *Kadamba Kula*, app. IV, p. 401.
[3] E.I. XIV, p. 120.

The smallest coin was known as 'Pana' and weighed about 6 grains. The Panas were discovered at Chandrapur.[1] The gold coin known as Pratapa was current under the Vijayanagar rule. It was half of the previous gold Gadyanaka. The Pratapa came to be known as Pagoda or Pardava gold coins during the Portuguese rule. The Portuguese gold coin was known as Cruzado and was higher in weight then Gadyanaka. The Persian silver coin 'Asrafi', that is, 'Xerafim' was also in use. it was worth half a rupee.

Education : It seems that the primary education was imparted through village pathasalas. For receiving higher education the students used to go to the centres of learning like Agrahara or the brahmapuri and the *maths* attached with the peoples. The important establishment was the Agrahara consisting of the learned Brahmins. The Brahmapuris conducted training in *Vedas, Upanishads, Shastras, Smritis* and *Puranas*. The Agrahara may therefore be said to have constituted the real university of medieval India. Goa Kadambas supported the cause of learning and made grants of lands for learned Brahmins to pursue their Brahmanical learnings. We come across a grant made by Guhalladeva II of the Goa Kadambas who made a grant of Savoi-verem to his royal priest called Pattavardhan and by name Narayan Bhat in the year saka 960/A.D. 1038. It is known from another inscription of Kadamba Tribhuvanamalla, saka 1028 i.e. A.D. 1106 that he established a brahmapuri at Gopaka, modern Goa Velha (Tiswadi) of twelve Brahmin families learned in Vedas, Religion and Philosophy. Gardens of coconut and cultivable lands from the villages Nerur and Pal (Tiswadi), Marcaim (Ponda), Cortalim (Salcete) and Raia (Salcete) were allotted for the maintenance of the Brahmin families. The lands and gardens formed the common property of Brahmacula and was not saleable and was free from taxes. A temple of Goddess Saraswati was established and for its expenses a piece of land known as (Sholegri) was allotted from Margao. Three houses were built up separately for the priests of the Goddess, one for the brahmin who delivered lectures to the public in religion and Puranas, another for a supervisor of the Brahmapuri and the third for its scribe.[2]

Kamaladevi, queen of Shivachitta Kadamba founded another Brahmapur of 30 Brahmin families at Degamve (Belgaum). The grant of Kamaladevi brings out the real nature of the establishment of Brahmapuri.

The land allotted for the Brahmapuri was divided among the principal Brahmin families. A portion of the land was often made

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[1] Dikshit-*Kadamba Gold coins*, JNS X, p. 45; Khare, *Kadamba Coins*; JNS XXVII, pp. 62-63.

[2] SMHD p. 45; E.I. XXX, pp. 71-78.

over to the temple of the agrahara for meeting the expenses of religious ceremony. The shares allotted were as follows : 10 Bhattopadhyayas—¾ share each; 9 Bhattopadhyayas—¾ share each; 13 Bhattopadhyayas—¾ share each; God Shri Katesvara—5 shares; God Shri Kamalanarayan—5 shares; Goddess Shri Mahalakshmi—3 shares; dining hall (for the expenses—3¾ shares; for the rites—3¾ shares; for explaining sastras—1 share; Rig-Veda—¾ share; Yajur-Veda—¾ share; teaching children—½ share; drinking water and place for fire—½ share; for teaching Ghat-Kadhyaya—10 nivartanas and 288 kammas in rice field, 10 nivartanas and 500 kammas in a field yielding small grains, and 2 nivartanas and 720 kammas in a field fit for betal plants; for the tank-9 nivartanas and 422 kammas in rice fields and 8 nivartanas and 424 kammas in a field yielding grain; for each share—1 field, measured by cow's hide; Narasinhabhattopadhyas—⅛ share; Ishvarabhattopadhyaya—⅛ share; total 50 shares.[1]

MEDIEVAL RULERS OF GOA (c., 1300 to 1510 A.D.)*

Kadamba—Chalukyas and Delhi Sultans (c., 1300—1350 A.D.)

An extensive geneology of the Chalukya dynasty of Kalyani is available. The King Kamadeva or Kavadeva who styles himself as Kadamba-Chalukya seems to be the 11th descendant from Chalukya king Ayyana, the brother of Jayasimha and Akkadevi, wife of Shashthadeva Kadamba II, the founder of the Halshi or Goa Kadambas.[2] The geneology states Harpaladeva as son of Kamadeva, who seems to have acompanied Tikka accompanied Tikka in his Harihar campaign along with Jaideva Gutta who was Mahamandaleshvar of southern districts.

The 1294, with the title of Emperor or Chakravarti, Ramchandra the ninth Yadav King of Devgiri (1271-1310), was supreme over the Deccan, Konkan and Karnataka. In 1294, a Musalman army was for the first time led into southern India by Alla-ud-din the nephew and afterwards the successor of Jelal-ud-din, the first Khilji emperor of Delhi (1288-1295). Advancing by forced marches from Karah-Manikpur on the Ganges, Alla-ud-din surprised Ramchandra, or Ramadev as Ferishta calls him, at Devgiri, took the city, and forced Ramadev to pay tribute and acknowledge the supremacy of the Khilji emperors of emperors of Delhi.[3]

Hoysala and Kadamba conflict was renewed when Alla-ud-din marched against the Yadavas in 1294. Taking the benefit of the

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[1] JBBRAS IX, pp. 266, 272, 287.

*This section has been contributed by Dr. V. T. Gune, Panaji, Goa.

[2] Bhardwaj V. S. *Ayyanavamshacharita Kavyam* (Introduction) p. 13, Delhi 1966.

[3] Briggs Ferishta I, p. 307.

decline of the Yadavas, Hoysala Vira Ballal III made a bid for the suzerainty of the Deccan. In 1299 A.D., he first subdued the Santara country by capturing Kotinayak and carrying off his elephants. He then moved towards the north into the Kadamba country of Banavasi and encamped at Sirise, which was long ago held by Ballal II. This camp was clearly chosen to control the trade which flowed into Kadamba and Santara country through the important road junction, at Sirise.[1] He tried to force his overlordship on Kavadev by claiming tribute and overran the Kadamba country on his refusal of its payment. It may be inferred from the Viragal that in order to oppose the aggressive activities of Ballal III, Kavadev concluded a defensive alliance with the Vetuji and Someshvar Chalukya at Sangamesvara and the united forces marched to Sirse. The Viragal records that Jagadala Gangeya Sahani the minister of Kadamba Chakravartin and Chalukya Chakravartin ordered Madiganda who probably had the van to charge the enemy.[2] It seems in February 1301, the war finally ended in favour of the Kadambas.[3]

Meanwhile matters in the North progressed and a new front was opened with the repulse the costly repulse of the grave invation. In 1303 A.D. Somaya damayaka, the husband of Ballal's sister started his campaign against Yadavas and marched to Halalkere and fought to the death against Kampildeva, a general in the Yadava army. The Kampili provided the base for the formalising of future Vijayanagar, which was in a large portion comprised of the Halasige and Hangal provinces of the Kadambas.[4] It is clear from the Hoysala inscription of 1305 A.D. that Yadava Chakravarti had opened hostilities against the Hoysalas with the determination of capturing their king. The Kadambas were certainly profited by these warlike activities of Hoysalas and Yadavas but the latter had soon to abandon the Deccan because of the invasion of their capital by the Delhi sultan. The Yadavas were weakened and were unable to hold their power over feudatories. This is confirmed by the Kadamba inscription of 1307 A.D., which by giving imperial titles to Kavadeva tacitly implied that he asserted his independence besides defeating the efforts of Vira-Ballal III to deprive him of his kingdom.[5]

Between 1295 and 1306 the Yadavas were not again molested and seem to have continued overlords of the south. In 1306 Alla-ud-din, who in 1295 had assassinated his uncle and usurped the Delhi throne, under his General Malik Kafur, sent a second expedition against

[1] Derrett, *The Hoysalas*, p. 146.
[2] E.C. VIII, Sa, 45.
[3] Derrett, *op. cit.*, p. 146.
[4] ibid., pp. 158-159.
[5] E.C. VIII, Sa, 32.

Ramchandra who had become irregular in paying his tribute. Malik Kafur subdued a great part of the Maratha country, besieged Devgiri, and forced Ramchandra to submit.[1] Ramchandra returned with Malik Kafur to Delhi, was treated with honour, and was not only restored to his old government but was presented with fresh territory for all of which he did homage and paid tribute to Ala-ud-din.[2] Ramchandra died in 1310. He was succeeded by his son Shankar who was ill-affected to the Musalmans. In 1310 Alla-ud-din sent an army under Malik Kafur and Khwaja Haji to reduce Dvarsamudra and the capital of the Hoysala ruler Ballala III (1290-1310). Leaving part of their forces at Paithan on the Godavari to overawe and hold Shankar of Devgiri in check, Malik Kafur and Khwaja Haji marched south, entered and laid waste the Hoysala kingdom, defeated and captured Ballala III and took and plundered his capital of Dvarsamudra. In 1311 Malik Kafur returned to Delhi with rich spoils.[3] Malik Kafur's campaign against Dorasamudra in 1310 A.D. probably did not disturb the Kadamba provinces of Hangal, Palasige, etc. We find Kavadev issuing grants till 1312 A.D.[4]

In 1312, as Shankar of Devgiri withheld his tribute, Malik Kafur entered the Deccan for the fourth time, seized Shankar and put him to death. He laid waste Maharashtra and the Karnataka from Cheul in Kolaba and Dabhol in Ratnagiri in the west as far east as Mudgal and Raichur in the Nizam's country. He established his headquarters at Devgiri, and from Devgiri realised the tribute of the princes of Telingana and the Karnataka and remitted it to Delhi.[5]

It is possible that during his 4th campaign, Malik Kafur might have laid waste the Kadamba country both in Palasige, upghats and in the Konkan, as he penetrated this time into 'Mabir' or territory on the sea-coast. Gopakapattana the capital of the Kadambas might have been destroyed, at least occupied by Muhammadan troops. If this invasion took place in the reign of Kadamba Kavadev-Chalukkya he could not have lived long after this event as he must have been then more than 80 years of age, presuming that he was 25 when he helped his brother-in-law Shashthadeva III in recovering his dominions in about 1247 A.D.

Harpaladeva the Kadamba-Chalukya, the son-in-law of Ramachandra succeeded Shankardev as Emperor of Devagiri in 1315 A.D. After Harpaladeva's tragic death, his relations might have taken shelter with other Hindu chiefs or gone to his patrimony in the Konkan.

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[1] Briggs' *Ferishta* I, p. 367.
[2] *ibid.*
[3] Briggs' *Ferishta* I, p. 365.
[4] E.I. VIII Sa, 32, Sb, 59.
[5] Briggs' *op. cit.*, p. 379.

In 1318, the emperor Mubarik (1317-1321) led an army into the Deccan, captured Harpal, and flayed him alive.[1] It is possible that the capital might have been then shifted from Halsi-Banavasi to the fortified city of Chandrapura for safety.

In 1327 the emperor Muhammad Tughluk 1325-1351 subdued distant provinces of Dorasamudra Mabir, Kampili, Warangal, the Karnataka, the west coast upto the Arabian sea[2]. After Malik Kafur's invasion in 1312 A.D., the Konkan must have been left free for about 10 years. The Kadambas also seem to have recovered the previous losses. It is probable that Gopakapattana might have been destroyed or occupied during the first invasion in 1312 A.D. The capital seems to have been shifted during this period to Chandrapur which was in the interior and also strategically better situated from the point of its defence. Chandrapur was not spared by the conquerors and it seems to have perished at the hands of the Muhammadan invaders of Tughluk by 1328 A.D. In the course of some excavations conducted in Chandor by the Rev. H. Heras and his post graduate research students in 1929, a copper coin of Muhammad Bin Tughluk was found within the garbhagriha of an ancient Saiva temple, while removing the debris and mud which occupied the space. The copper coin must have been dropped by one of these soldiers of Muhammad Bin Tughluk while engaged in the work of destroying the temple. This destruction of the city of Chandrapur at the hands of Delhi Sultans might have taken place during the time of the son or grandson of Kavadev, Kadamba-Chalukyas, whose names are not known.

Harihar I, the founder of the Vijayanagar empire was appointed Governor by Muhammad Tughluk in charge of Bellary and a portion of Krishna Tungabhadra Doab and sometime between 1327-1344, his title was Purva-Paschima-Samudrapati, and his sway included the sea coast as well.[3] However, from a Verem (Ponda-Goa) copperplate of Malik Bahadur Timma Mantri of Saka 1271/1348 A.D.[4] It is noticed that the inscription is written in Marathi language and Hale Kannad script. It seems he was then ruling in Goa as local officer of the Muhammadan king. It is possible that he might have been appointed by Delhi Sultans and continued under the Bahmani kingdom as their officer. The Goa Kadambas might have regained their lost kingdom during 1327-1336 A.D. Though Kadamba country was no more attacked by the Delhi Sultans, the Nawab of Honavar seems to have sacked their capital Chandrapur during the 14th century.[5]

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[1] Briggs, *op. cit*, p. 389.
[2] *ibid*,. p. 413.
[3] Sherwani, *Bahmanis of the Deccan*, p. 23.
[4] B.I.S.M., Poona *Itivritta* saka 1837, pp. 83-86; O.P., 22, 407.
[5] *Ibna Batuta travels* (Gibb) p. 230.

We learn from the Corgao (Pernem-Goa) copperplate grant that one King Bhimabhupal was ruling over Konkan—900 from Govapuri in Ṣaka 1273/1351 A.D.[1] We do not know how long Bhimabhupal ruled over Goa from Gopakapattana. The Corgao copperplate records the grant made by King Bhimabhupal to Lakshmana Thakur of Vatsa-gotra from the locality known as Bhagaravati from the village Pendina i.e. modern Pernem (Pernem taluka of Goa). Bhimabhupal is described as lord of Konkan. It records names of 8 rulers who preceded the king Bhima. His predecessors Nagarjuna, Shyama, Joga and Uttara had the title of Nripati or king. His brothers Bhanu, Kamesh and Nagendra are also attributed the title of king. This family appears to be of some local chieftain who ruled over Pernem taluka under the Kadambas. After the sack of the Chandrapur, the Kadamba city, by the Nawab of Honawar, Bhimabhupal seems to have established in Govapuri itself as a ruler of Konkan-Gomantaka.[2]

Vijayanagar Rulers and Bahmani Sultans

Ferishta relates that soon after the departure of Muhammad all these conquests were wrested from him and continued independently.[3] Of the forty years between the first Musalman invasion of the south in 1294, 1328 and 1335, no record has been traced. It must have been a time of trouble and disorder, favourable to the rise of the petty chiefs, who, when the central authority was weak or broken, divided and harried Deccan and Konkan. The Kampili kingdom in its widest sense formed the immediate core of this new enterprise, and the brothers Bukka and Harihara struck out westwards, quickly incorporating Belvola, Halasige, Hayve and the coast around Goa and towards Barapur[4]. The foundation of Vijayanagar was assisted by the wisdom and support of Vidyaranyasvami, who is equally identified with the distinguished jurist Madhava and was almost certainly the then head of the Sringori Matha. He, it was who provided the religious back-ground to the enterprises of the apostates from Islam, and their capital was, we are told, at first called not Vijayanagar ("city of victory") which name was not appropriate to the city in 1336, but Vidyanagara, the 'City of Wisdom'..[5] Palasige, the original province of the Goa Kadambas seems to have provided base for the activities of Harihar.

While Vijayanagar was building an independent Kingdom, Muham-mad Tughluk (1325-1351), pleased with its central position and the strength of its hill-fort, was trying to make Devgiri, or as he now

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[1] Ink Impression, State Museum, Panaji.
[2] Corgao copperplates in Newsletter, Historical Archives, Archaeology (Museum), Panaji-Goa, vol., I, 1, pp. 49-54.
[3] Briggs, *op. cit.*, p. 414.
[4] Derrett, *op. cit.*, p. 168.
[5] Rice, Mysore I, 197; III, 98.

called it Daulatabad the City of Wealth, the capital of India. He thrice, forced the people of Delhi to move to Daulatabad, but all his efforts failed. The Deccan continued hostile to his rule. And in the troubes which embittered the latter part of his reign, the Deccan nobles more than once rose in revolt. At last in 1347, under the leadership of an Afgan named Zaffir Khan, afterwards known as Alla-ud-din Hasan Gangu, who took the name of Bahmani out of respect to a Brahman patron, the Deccan freed itself from all connection with Upper Indian Hasan moved his capital from Daulatabad about 190 miles south-east of Kulburga and there founded a dynasty, which, under the name of the Bahamani or Kulbarga kings, ruled the Deccan and great part of the Karnataka for nearly a century and a half (1347-1489).[1] By the end of the reign of Alla-ud-din Hasan Shah i.e. 1358, his kingdom extended from Mandu in the North to Raichur in the South and from Bhongir in the East to Dabul and Goa in the west. Thus the south portion comprised of Kadamba territory was already under his jurisdiction.

Mahamadalesvar, Hariharas brother Marapa extended his province towards west and acquired the kingdom in the west by 1347 A.D. His capital was Gomanta-Saila—the excellent Chandragutti. This kingdom was the ancient Malerajya or hill kingdom also called Araga kingdom. Marapa's jurisdiction also extended to Haive or North Kanara and Banavasi.[2] The record states that in order to inquire into the welfare of the people, Marapa set out an expedition. As he was proceeding on a certain occasion, he encountered the Kadamba king, surrounded like Shakra or God Indra by an army composed of elephants horsemen, and foot soldiers. Marapa defeated him in the battle.[3] Vira Virupa (Virupanna) son of Bukka I, the brother of Harihara I was ruling over Chandragutti in 1367. Thus Malerajya and Palasige which formerly belonged to the Goa Kadambas were included in the empire of the Vijayanagar by 1347 A.D. The only province of Konkan 900 was left with the Kadambas and again it was in general control of Malik Bahadur Timma Mantri and king Bhimabhupal as already seen before.

In 1357 Alla-ud-din Bahmani divided his kingdom into four chief Governments. His Belgaum possessions (i.e. Palasige of Kadambas) were included in the first of these divisions which stretched from Gulburga west to Dabhol in Ratnagiri and south to Raichur and Mudgal. This was placed under Malik Seif-ud-din Ghuri.[4] Part of the Karnataka, as far west as the Kanara frontier, including south

[1] Briggs *Ferishta* II, p. 291.
[2] E.C. VIII, Sb, 375.
[3] *Ibid.*,; Heras, *Beginnings of Vijayanagar History*, p. 100.
[4] Sherwani, *op. cit.*, p. 62.

Belgaum, acknowledged as overlords the Vijayanagar kings. The Bahmanis and the Vijayanagar kings kept up an almost constant rivalry. The usual seat of their wars seems to have been beyond the limits of the former Bombay-Karnataka, and the record of their wars is probably one-sided as Ferishta dwells on Musalman victories and passes over Musalman defeats. In 1368, Bukka, the second Vijayanagar king (1350-1379) suffered a series of defeats at the hands of Muhammad Shah Bahmani (1358-1375). He was the first Bahmani king, who, in person, crossed the Tungabhadra, and followed the policy of persecution of Hindus. Goa does not seem to have been excluded from it. The Konkana-Khyana refers to these penal limits, it observes that, fearing of defilement on the part of the Mlenchhas, the image of Saptakotesvar, the family deity of the Kadambas was removed from its original place in the temple at Naroa of Divar in the Tiswadi taluka and buried in the nearby rice field. Here it presumably lay until the restoration of its temple by Madhav Mantri of Vijayanagar, on his conquest of Goa.[1]

At this time persecution of Hindus reached its highest peak. Many Hindu families seem to have migrated either towards the north in the jurisdiction of the Hindu chief of Sangameshvar, who was also related to Goa king or towards the south in the Kanara district. Many Sarasvat Brahmin families who migrated at this time to Kanara formed the Chitrapur group of Saraswats.[2] During Muhammad Shaba's campaign against Vijayanagar an insurrection of his governor of Daulatabad, Baharam Khan Mazandarani took place at Gulburga in 1365 A.D.[3] It was laid by Govindadev, the Maratha Chief of Naiks from Goa. Hindu chiefs who lost their ancient kingdoms, during the Muslim invasions of the Deccan and Gujrat, joined him. Govindadev's relations lost their patrimony of Kalyani and Veeradev of Konkan (Goa) suffered heavy losses at the hands of the Bahamani sultans.[4]

After their first war with the Bahmani Sultans Muhammad Shaha I (1365 A.D.), the Vijayanagar rulers realised the strategic importance of Krishna Tungabhadra Doab. Arrangements were therefore made to guard the woods and hill forts in this tract. The two fortresses of Belgaun and Bankapur were thus well garrisoned from the point of the defence of their dependencies (Thanadaries) extending upto the sea coast in the Konkan from Gokarna to Sangameshvar in the north. During their next invasion of Vijayanagar territories Mujahid Shaha put forward his claim to the fortress of Bankapur.

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[1] Briggs' *Ferishta* II, p. 194 ff.
[2] Panchamukhi, Reports No. 8284; *Dakshina Jilheya Itihas* p. 336.
[3] Briggs' *op, cit.*, p. 198 ff.
[4] *ibid.*

According to the Portuguese historian Joao de Barros, the Thanadaris lands of Goa were held by the Chief of Bankapur, before the conquest of Goa by Muhammad Gawan in 1472 A.D. These territories comprised of the ancient patrimony of Chalukyas and Kadambas, which formed one of the outer provinces of Vijayanagar empire. The Bankapur principality was probably founded during this period from strategic point of view. Govindadev, the Chief of Naiks of Goa who revolted against the Bahmanis probably established in it. His descendants Kamaji and Appaji enjoyed the privilege of leading the personal bodyguard of the emperor of Vijayanagar, when the emperor's armies marched.[1]

From A.D. 1367 for about 10 years peace prevailed between Vijayanagar and Gulburga. Taking the opportunity of the chaos which followed at the Bahmani court after the death of Sultan Mujahid in 1378 A.D., Madhav who was placed in charge of Banavasi and other adjacent districts by Bukka I after the death of Marapa[2] seems to have turned towards the consolidation of the Konkan, which was under the influence of the Bahmanis since 1356, when Goa was occupied by the armies of Alla-ud-din Hasan Shaha, the first Bahmani Sultan of Gulburga. The Bahmanis territories above the ghats beyond Kali river could be easily defended from Gulburga. A new strategy was therefore followed and one army marched into the old Yadava province of Torgal including Gadag. After strengthening the dependencies of Bankapur to its north, Madhav made Canara as his base for further operations into the Konkan; crossed the Kalinadi river and captured Goa, the capital of Konkan. The record says, having killed the Turuskas who were established there, he reinstated the God Saptanath and others who had been removed by them. The Konkan was conquered by 1380 and is referred to as the part of Vijayanagar possessions from April 1380.[3] It is possible that a severe battle took place between the Bahmani faction in the Konkan and the Vijayanagar and certain Timmappa from the side of Madhav i.e. Malappa Odeyar, greatly distinguished himself and attained the 'Heavenly World'. The battle took place near Modiya-goumbu.[4]

During his conquest of Kanara coast, Madhav seems to have reduced the Kadamba King Kamadeva ruling from Chandaur, who styled himself as *Konkan-Haiva Rajyadhisha*, i.e. Lord of *Konkan* and *Haiva* country. He was probably the descendant of Kamadeva, the brother-in-law of Shashthadeva III of Goa Kadambas whom he succeeded after his death.[5]

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[1] Joao de Barros, *Decada*, II-1-V., Ed. in 1777; Sewel, *Forgotten Empire*, p. 119.
[2] MAR. 1929, p. 172.
[3] JBBRAS IV, pp. 107-110,; JBHS IV-2, p. 27; O.P., 22, p. 421 etc.
[4] Q.J.M.S. XIX No. 1, pp. 1-27; JBHS IV. 2. 178; O.P., 22, p. 419, etc.
[5] E.C. VII Sa 55; Moraes G.M., *A Forgotten Chapter in History of Konkan* in Bharat Kaumudi Commemoration Vol. Part I, p. 455.

After the annexation of the territory to the Vijayanagar Empire, Madhav seems to have made Govapuri the capital of Aragagutti kingdom with a subordinate official at Gutti to carry the administration in his name. In an inscription of 1389 he is referred to as *Govapuradhish* or Lord of Goa.[1]

Scholar, statesman and General Madhav dominated the stage of Vijayanagar history and history of South Konkan for about half a century. The agrahara or establishment of Brahmapuri at Kochare village from (Sawantwadi), north of Goa, was a memorial of his Konkan rule and the foundation was named as Madhavapur. Karhade Brahmins, who migrated from Gomant at the time of the Bahmanis were re-established by this foundation. The agrahara or Brahmapuri of 12 Rigvedi Brahmanas was established at the village Govali-Mauli in Tiswadi (Goa) and it was named as Manchalpur in A.D 1391.[2] An embankment was also built to the bank called *Manchalasamudra*. It is also learnt from the record that waterfall from the hill on the north-eastern side of the village was named as Madhav Tirtha after the name of the Minister Madhav. The Old Goa city developed later on in the neighbourhood of this Brahmapuri.

In 1390 A.D. Araga-Gutti province was separated for efficient administration and Mallap-Odeyar was posted as its vice-roy. Chandragutti was made an apanage of the Goa-kingdom.[3]

Madhav was recalled from his Rajadhani of Goa, promoted to the status of a ruler of Banavasi and Narahari mantri succeeded him in the Vice-royalty of Goa in April 1391 A.D.[4] He was a Brahman of the Atreyagotra and a son of Brahmarasa and his wife Manchambika. He was a disciple of the sage Vidyasankara and Madhav mantri is said to have installed him in his office. Narahari is described as a man of kingly presence, a devotee and patron of learning. He held the office upto 1395 A.D.[4]

Baichanna-Vodeyar succeeded him.[5] He was a Brahmin of Atreyagotra and was also called as Bhaskar. He was probably the brother of Narhari Raya. In a record of 1396, he is described as extending the kingdom of Goa-Gutti on all sides[6] He captured the Bahmani fortress of Rangini with its dependencies which is fifty-five miles to the south of Kolhapur. The fight for this fortress is referred to in a Virgal dated 26th September, 1395, which records the memory

[1] MAR. 128-129, p. 82.
[2] JBBRAS IV pp. 107-110; o.p., 22, O.P., 36-48; Varde Valaulicar V.R., *Goencaranchi Goyabhayali Vasanuk*, p. 104.
[3] E.C. VII, Sk., 313.
[4] JBBRAS IV, pp. 109-115.
[5] E.C. VII, HI, 71; MAR 1941, p. 202.
[6] *ibid*. Sk. 241.

of a hero who fell on that occasion, that "Chinnaya Nayak the son of Mahasamantadhipati Gopaya Nayaka in the capture of Rangini fought with Turushkas broke their arms and giving up his body in the service of his lord ascended Vaikunta"[1] This Baichanna completed the work of consolidation of Konkan undertaken by Madhav. He brought the country which lay between Konkan and Toragala under Vijayanagar sway extending the boundaries of the Goa-Chandragutti province to the modern Belgaun and part of Kolhapur district. It seems the Sangameshvar principality had already accepted the supremacy of the Vijayanagar during Bukka's campaign against Bahmanis before 1360 A.D.[2] Baichanna continued in the Vice royalty of Goa till 1406 A.D. There are no military achievements to the credit of his successors in his office. He was assisted in the local administration of the country by Mai Senavai, son of Purus Senavai.[3] The jurisdiction of Vijayanagar continued in the Konkan upto Sangameshvar till the Mahmud Gawan's submission of Sangameshwar or Vishalagad in 1472 A.D.

Savanna, seems to be the first among these later Vijayanagar administrators of Goa-Gutti kingdom. He is referred in a record of 1412-13 A.D.[4] Nanjana Gosawi succeeded Savanna. In the Nageshi inscription (1413 A.D.) he is described as clever and prudent in religion.[5] Mai Senavai, son of Purso Senavai from Konkan (Goa) and son-in-law of Deshamukh of Bandora seems to have carried local administration as before during the vice-royalty of Nanjana.[6] The stone inscription at Nagesh Temple at Bandiwadi (Ponda) records grant made by the village people of Bandiwadi to Shri Mahalakshmi dated saka 1335/A.D. 1413. The grant was conferred by Mai Senavai, the representative of the Vijayanagar ruler at Cuncolim (Salcete). In 1417 A.D. Virupadandanayaka who was in-charge of Goa was residing at Chandragutti.[7] About the year 1415, Trimbakadev appears to have been appointed as Administrator of Goa. He is given the title of glory of his arms (Immadi Deva Raya).[8] A stone inscription of the time of Devaraya-II of Vijayanagar dated saka 1347/A.D. 1425 records grant of the two villages Vagurumbe and Akshya to the Jain Basti of Neminath at Bandiwadi (Ponda). This grant shows that the Vijayanagar rulers took interest in the social and religious development of their subjects. It also states that Trimbak son of Lakappa was governing *Gove* and further adds that the place Bandiwadi was

[1] E.C. XII, Tp. 44; B.G. XXIV, p. 319.
[2] Sardesai G.S., *History of Sardesai family Uttarardha* I, p. 73.
[3] O.P., 22, of 1938, p. 44.
[4] JBBRAS XII, p. 341.
[5] JBHS IV. 2, p. 7.
[6] O.P. 22 of 1938, p. 443 ff; JBHS IV. 2, pp. 7-8.
[7] E.C. VII, Sk., 37.
[8] E.C. VIII, Sb., p. 565.

established by a king named Shripal in early days[1] Hampeya Raya, son of Arasappa imperial treasurer is referred to as Viceroy of Goa in 1431.[2] His grants to Visvesvararanya Shripal, a holy man who resided at Hampe were registered at the office of the Karnika (Accountant) of Goa-Gutti province.[3] He was succeeded by Irugappa-Vodeyar in 1442 A.D.[4] After him Mallarasa took charge in 1445 A.D.[5] During his administration Chandra-Gutti was separated from Goa and annexed to the old province of Hampe. This partition probably took place during 1448 A.D. when Mallarasa relinquished his office.[6] It seems Baichanna Vodeyar, son of Triyambaka was ruling over Goa-Konkan before 1454 A.D. and probably he was the last Viceroy of Goa-Konkan as no documents giving any more names for the period beyond 1450 are noticed.

The Portuguese Chroniclers relate that before 40 years of its conquest by the Bahmani Sultan in 1472 A.D., Goa had already freed itself of Vijayanagar domination; while the Muslim historians say that it formed part of Vijayanagar till 1472 A.D.[7]

What it probably meant is that Goa was since then (i.e. from 1445 A.D.) ruled by its own Chief or Naik, just like the other adjacent outside districts of the Vijayanagar Empire. The territories to the north and south of Goa were ruled during this period by independent chiefs-Sangameshwar by the Chalukyas; Kharepatan by its hereditary Nayak Sardesais; Mirjan, Honavar, Bhatakal and Gersoppa by their Navaks. The dependencies of the fortresses of Belgaun and Bankapur from the upland territory were governed by their ancient feudatory Chiefs. As described earlier the Bankapur Chief was a descendant of ancient Chalukya-Kadamba rulers of Goa. According to the Portuguese historian. Barros, the Thandari lands of Belgaun and Bankapur extended upto Goa and were ruled by the Hindu 'Beras' and 'Gis' before their conquest by the Bahmanis in 1472 A.D. The 'Gis' of Bankapur were two Maratha brothers Kamoji and Appaji, when the Portuguese reached Goa 1509 A.D. and an embassy was sent by Albuquerque to Bankapur Chief before the conquest of Goa in 1510 A.D.[8]

We do not notice the names of Vijayanagar Viceroys of Goa after about 1445 A.D. and it is possible that during this period Goa was

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[1] Annual Report on Indian Epigraphy 1962-63.
[2] E.C. VII, Sk., 40.
[3] MAR 1934, p. 120.
[4] E.C. VIII, Sb., 489.
[5] E.C. VII, Sk., 36.
[6] E.C. VIII, Sb. 187.
[7] Correa Gaspar, *Lendas da India* II, p. 55, Lisboa, 1860; *Com. Dalb.* II, p. 92; Barros II. Liv., V, Cap. I, ed. of 1777.
[8] Sewel, *Forgotten Empire*, p. 119; Barros, *Dec.* II. 1. V.

brought under the jurisdiction of Bankapur. Sabaji Chalu, the uncle of Kamoji and Appaji Chiefs of Bankapur was probably ruling over Goa, when it was taken by Mahmud Gawan in 1472 A.D. It is not known whether he accepted the vassalage of the Bahmanis, after their conquest of Goa. His son Malharrao the king of Honavar, was brought up in Goa and had fought wars against the Turks. Naikwadis of Goa villages, respected him as kingly person, while they considered, Sabaji's brother Timoja, who helped the Portuguese in their conquest of Goa in 1510, as a man of lower descent. As will be seen in the next section Albuquerque invited Malharrao and entrusted to him the Government of Thanadaris of Goa in 1511 A.D. as he was liked much by the village headman or Naikwadis of Goa as their ruler.[1]

The Portuguese chroniclers had in error transferred the name of Sabaji, the Hindu ruler of Goa to the Adil Shahi Muslim King Yusuf Adil Shah as 'Sabayo' who ruled over Goa only few years before its invasion by the Portuguese in 1510 A.D. Varthema has left a valuable account of this period, about 1498 A.D.; he speaks of Goa as being then under the "Savaim" which is this writer's form of expressing the name of that ruler. He was known to the Portuguese as the 'Sabayo', who was the Governor of the place (Goa) under Bahmani ruler of the Deccan. According to Barros, the word was derived from the name of Yusuf Adil Shah's birth place, *Sava*. Yule, in his '*Hobson Jobson*' has adopted the explanation of Barros. He has overlooked the correction of the statement of Barros by the great historian Diogo de Couto who states that the 'Sabaio' was a vassal of Vijayanagar, whose sons he knew personally. These sons laughed heartily, when Couto read them Barros' derivation of the word 'Sabayo', their father they said was neither a 'Turk' nor 'Yusuf'[2]

The Portuguese chronicler states that during this period the old city of Gopakapattana situated on the bank of Zuari once capital of an extensive empire was transferred to its site on the 'Old Goa' at ancient Ela village as the river Zuari became shallow. The river Mandovi was deeper and broader, owing to the large streams of water which flowed into it from the Ghats during the rainy season. The inhabitants of the old city, who were very rich engaged in commerce and gradually removed to this place. A new city was developed where in a short time rose in every direction temples and edifices remarkable for their architectural beauty, and new docks were built for the construction of large ships intended to maintain a commercial intercourse

[1] *Com. Dalb.* III. 26; B.G. XV. 2. 110; *Lendas* II, pp. 160-62.

[2] *Lendas* II, p.p. 55-56; *Dec.* IV. 24 pp. 416-429; Duarte Barbosa p. 186, No. 1; Whiteway, *Rise of the portuguese power in India*, p. 133.

with all ports of India. The city rapidly rose in importance, chiefly by its trade in horses imported from Ormuz, for which there was a great demand in Vijaynagar and other neighbouring kingdoms.[1]

The defence of the island was well secured by its geographical position. The rugged hills surrounding it required limited forces for its defence from the mainland, as it was inaccessible, except through narrow passes from the mountain ranges, which were defended by constructing towers at these entrances. It possessed quite sufficient force, both horse and foot consisting "principally of archers, whose valour, combined with their skill in using the bow, enabled them to render valuable services not only to their own but also to the neighbouring states. The city being the chief emporium of trade on this side of India, caravans of merchants constantly poured into it from extensive commercial transactions with the natives and aliens alike. Such indeed was the prosperity of Goa that it is said to have been the only city on the coast which enjoyed at this period a revenue of £10,000".[2]

During the fifteenth century, the Bahmani kings made three efforts to subdue the south Konkan. In 1429, Malik-ut-Tujjar overran the country and the Konkan chiefs agreed to admit Bahmani supremacy.[3] No regular government was established, and only five years later, the chiefs of Raygad and Vishalgad refused obedience. A second expedition of A.D. 1436 brought those chiefs to order.[4] But the country was unsubdued. The tribute was again withheld. In 1453, preparations were made for a complete conquest. The forts above the Sahyadris were reduced. But this second expedition ended in a disaster. The Bahmani army was not acquainted with the hilly terrain. Their guide Shirke, the defeated Maratha chief, collected troops from Fort Vishalgad and surprised them with a massacre of the large number of Muslim army.

For sixteen years till A.D. 1469 the Bahmani Sultan did not turn towards the Konkan. The Rayas of Khelna and Sangameshwar were powerful and used to intercept the Muslim trading vessels plying in the Arabian Sea, sending hundred of boats out every year to fight with these ships.[5] The Raya of Sangameshwar (Khelna) had a fleet of 300 vessels to plunder the Mecca pilgrims annually[6] (and many thousands of Muslims were sacrificed at the altar of the greed of these people[7]

[1] *Lendas* II, pp. 26, 55, 63; Fonseca, *Archaeological Sketch of the City of Goa*, p. 126; *Com. Dalb.* II, p. 92.
[2] *Com. Dalb.* II, p. 92.
[3] Briggs, *Ferishta* II, p. 255.
[4] *Ibid.*, p. 261.
[5] *Ibid.*, p. 269 to 272.
[6] *Ibid.*, p. 297-98.
[7] Sherwani, *The Bahmanis of the Deccan*, p. 310.

These piratical raids led to the decline in the maritime commerce of the country as the merchants were afraid to take out their wares. These chiefs were enriched by their robbery but the country as a whole was impoverished.

The chiefs seem to have collected together 300 vessels for the plunder of the travellers going by sea, which alarmed the Bahmani emperor and an expedition against Konkan and Goa was set up in A.D. 1469 under the leadership of Mahmud Gawan, the Malik-ut-Tujjar for the reduction of these refractory Konkan chiefs of Khelna (Shankar Rai) and Sangameshwar (Jakhurai).[1] This expedition lasted for three years. The proud fort of Raingana was surrendered only after the payment of an indemnity of 12 lakhs.[2] The largest fort of Machal in its neighbourhood was immediately reduced to submission in A.D. 1471. After Machal and Khelna, the forts of Bulwara, Miriad and Nagar were captured.[3] Mahmud Gawan then encamped at Kolhapur during the rainy season of A.D. 1471. After the rainy season, the fort of Sangameshwar was attacked which was surrendered late in 1471. He then marched against Goa, after complete submission of the forts in the surrounding region in 1472. The Khwaja sent 120 boats by sea, beside the land forces consisting of 'tigers' of Arabia and 'lions' of Persia. Hardly any attempt was made for defending the city, when the Bahmani army marched against it, it was annexed to the Bahmani empire in A.D. 1472.[4]

After the conquest of Goa, Mahmud Gawan entrusted the administration of the newly conquered territory from the Konkan including Goa to one of his officers, Khush Kaddam, who was received on the occasion with the title Kishwar Khan. Later on his charge was transferred to Najm-ud-din-Gilani and was succeeded on his death by his son Bahadur Gilani.[5]

In 1472 under orders from Virupaksha of Vijayanagar, Vikram Ray, Raja of Belgaum, helped by the Hindu chief of Bankapur in Dharwar, made an attempt to retake Goa. Muhammad Shah Bahmani put himself at the head of the large army and marched against Belgaum and captured it which is described as a fortress of great strength, surrounded by a deep wet ditch, and near it is a pass whose only approach was fortified by redoubts. According to Ferishta, Vikrama Ray, who commanded the fort, at first asked terms which were refused. He then defended himself with great vigour and prevented Khwaja Mahmud

[1] Sherwani, *op. cit.*, p. 310; Munt. III, p. 105.
[2] Sherwani, *op. cit.*, p. 312.
[3] *Ibid.*, p. 315.
[4] *Ibid.*, p. 316.
[5] Briggs, *Ferishta* II, p. 299.

Gawan, the Bahmani General, from filling with wood and earth the wet ditch in which lay the chief strength of the fort.[1]

The capture of Belgaum and the conquest of its dependencies including Goa brought the whole of the Bombay-Karnataka under Musalman rule and for a time crushed the power of the Vijaynagar king. In 1478, the Bahmani Minister Khwaja Gawan, a Persian of great learning and power, reorganised the provinces of the Bahmani empire into eight *tarafs* or *provinces*. Each province had its own governor appointed by the king for the management of the different parts of the province.

Under this new distribution, the country from Junnar, including several dependent districts in the south, Indapur in Poona, Wai and Man in Satara, and the forts of Goa and Belgaum, were placed under the Governorship of Fakr-ul-Mulk.[2]

In 1481, the new Vijayanagar king Narsingh attempted to recover Goa. The attack was repelled by Muhammad Shah Bahmani who is mentioned as visiting Belgaum and examining the city and fortifications.[3] The ambition of the provincial Governors, which Khwaja Gawan had succeeded in curbing, after his death did not long remain at rest.

In 1485, Muhmad Shah appointed Malik Ahmad to the government of the two provinces of Daulatabad and Junnar and shortly afterwards he reduced a number of Ghat and Konkan forts, some of which had never before been subdued by the Musalmans. Among these were Koari, Bhorap or Sudhagad, Pali or Sarasgad, and Mahuli, and he laid siege to Danda-Rajapur but without success. While thus engaged, his father Nizam-ul-Mulk was put to death, and Malik Ahmad thereupon revolted and established the Nizam Shahi dynasty of Ahmadnagar. In like manner Yusuf Adil Khan in 1489 founded the Adil Shahi dynasty of Bijapur. In 1490 the new king of Ahmadnagar took Danda-Rajapur, and thus secured sizeable possession of the part of the Northern Konkan.[4]

About 1490 A.D., Bahadur Gilani, the Governor of the Konkan, broke into open rebellion. He seized Belgaum and Goa, established his headquarters at Sankeshvar about thirty miles north of Belgaum, and acquired possession of Miraj and Jamkhandi. He made an attempt to establish a separate navy on the Konkan coast and stirred the dangerous enmity of Mahmud Begada (1459-1511), the greatest of the Gujarat Ahmedabad Sultans, who at this time held the Konkan coast

[1] Briggs' *Ferishta* II, pp. 302, 303.
[2] Grant Duff's *Marathas*, p. 29; Sherwani, *op. cit.*, p. 322.
[3] Briggs' *Ferishta* II, p. 319.
[4] B.G. I, pt. II, p. 32.

as far south as Cheul. Under Begada's remonstrances and threats Mahmud Shah Bahmani was forced to take active measures against the rebel Gilani. In 1493, Yusuf Adil Khan of Bijapur was sent to Konkan with 5,000 horses to secure the whole Konkan sea-board. Mahmud Shah himself took Jamkhandi and placed it in charge of Yusuf Adil Khan's troops. After Jamkhandi Mahmud marched to Sankeshvar which yielded to him in three days. Thereafter, he went to Miraj, twenty-eight miles west of Athni, defeated Gilani's troops and took the town. Gilani, after one or two more reverses beyond Belgaum limits, was (1493) slain by an arrow, and his estate including Belgaum was conferred on Ein-ul-Mulk Gilani.[1]

Adilshahi Rulers of Bijapur (1489-1510)

The three strongest of the Bahmani nobles, Yusuf Adil Khan of Bijapur, Ahmad Nizam Khan of Junnar, afterwards of Ahmadnagar, and Kutb Khan of Golconda agreed to divide the Deccan. In this division Ein-ul-Mulk Gilani's estate of Belgaum and the neighbouring districts were assigned to Bijapur. Ein-ul-Mulk Gilani did not resist the transfer of his allegiance from Bidar to Bijapur and in token of his approval went with 6,000 horses to the capital of his new overlord.[2]

About 1,500 A.D., in a fresh treaty about the partition of Bahmani lands, the Commander of Goa agreed to acknowledge Yusuf Adil Khan of Bijapur as his Sovereign and the whole of the Konkan south of Savitri or Bankot river came under Bijapur. As already seen before, the local chief Sabaji, the head of Naiks of Goa ruled over Goa during the last quarter of the 15th century.[3] The Portuguese Chronicler's description of 'Savaim' to whom Varthema refers in his travels as a ruler of Goa in 1498 seems to be erroneous[4]. Yusuf Adil Shah made Dabhol as the headquarters of his Government of South Konkan and took steps to improve the district and bring its wasteland under tillage.[5] The Subha of Dabhol was called as Mustafabad and consisted of two main divisions—Kudal and Rajapur. Ponda, Panchamahal formed part of Kudal. Banda was the sub-division of Kudal. Vengurla and Goa islands were separately classified as Ports. It is not certain whether entire Salcete taluka of Goa was comprised of Bijapur's jurisdiction in about 1502 A.D. These were further divided into main divisions of Parganas, extra division of Karyats, sub-divisions of villayat, petty divisions of Tarfs of Mahals. Ports were separately administered.

[1] Briggs' *Ferishta*, pp. 332-334; B.G. XXI, p. 366.
[2] Stake's *Belgaon*, p. 23.
[3] Briggs' *Ferishta* III, p. 19.
[4] *Duarte Barbosa* I, pp. 172-74, note-1; Diogo Couto, *Decada* IV. ii. ix, pp. 416-19; Whiteway, *Rise of the Portuguese Power in India*, p. 133, No. 1; *Com. Dalb.* III, pp. 23-25.
[5] B.G. I, pt. II. p. 33.

Village was the last administrative division and was managed by an hereditary Headman or Gaonkar. Ancient hereditary chiefs of Mahals, Parganas like Dessai and Sardessai were confirmed in their offices.

Duarte Barbosa has given the description of the Muslim city of Old Goa as follows : " The city was inhabited by Moors, respectable men and foreigners and rich merchants ; there are also many great Gentile (that is, Hindu) merchants and other gentlemen cultivators and men-at-arms. It was a place of great trade. It has a good port to which flock many ships from Mekkah, Aden, Hormuz, Cambay and Malabar country. The town was very large with good edifices, and handsome streets surrounded by walls and towers ".[1]

According to Tome Pires (1511 A.D.), it was a key to first and second India and was separated from the Deccan by Kharepatan and, towards the south it extended upto the island of Cintacora.

It was a better port than Chaul and had lavish trade. Many merchants came there from distant countries. The Goanese maintained roving armada. Goa produced good seamen who could stand hard work. Seamen who sailed the ships were thus natives of the country. There was plenty of good wood available in Goa and there were good craftsmen who constructed ships which were esteemed everywhere. It produced high variety of betel which was exported to Aden, Hormuz and Cambay. It imported horses from Hormuz, Persia and Cambay and supplied them to Deccan and South Indian rulers. They took back calico, fine muslin, rice, areca, spices, etc. and many gold 'Pardaus' in exchange of horses. A horse was worth as much as 800 Pardaus. Goa and the surrounding district yielded 400,000 Pardaus a year from the customs duties from everything that came into the port.[2] According to the Portuguese chronicler de Barros, the city of Goa alone yielded Adil Shah £ 5,000, besides the £ 2,000 or 400,000 Pardaus which that monarch received from the surrounding districts which then formed the territory of Goa.[3] Another chronicler Gaspar Correia says that the territory of Goa yielded 300,000 Pardaus of gold of £ 1,500.[4]

Adil Shah being jealous of the growing power of Ein-ul-Mulk of Konkan, took from him, his command in the Bijapur army, deprived him of his jurisdiction over Konkan and reduced his districts only to Hukeri and Belgaun in 7502 A.D.[5] After the loss of Goa to the Portuguese in 1510, Belgaun was also taken from him and granted to

[1] *Fonseca*, p. 132; Stanley's *Duarte Barbosa*, p. 74.
[2] Tome Pires, *Suma Oriental* (1511 A.D.), C.R. Boxer's translations, pp. 58-60 in Hakluyt Series, London.
[3] *Deccan*, II, Liv. V. Cap. II, p. 455.
[4] *Lendas* II, p. 74.
[5] Stake's *Belgaon*, p. 23.

Khushru Turk, a Persian of the province of Lar and a Shia by religion together with the title of Asad Khan in reward for delivering the young king Ismail Adil Shah, from the treachery of his guardian Kamal Khan Dakhani. Asad Khan held Belgaun for 38 years (1511-1549) during which he was the mainstay of Bijapur. After the conquest of Goa, the Portuguese established their relations with Asad Khan.

PORTUGUESE IN GOA : 1510-1961*

The Portuguese conquered Goa in 1510 and made it the capital of their seaborne empire in the east. They had initiated the process of establishing such an empire towards the close of the 15th century. Vasco-da-Gama, a nobleman and navigator, had set out from Portugal on July 8, 1497, with four ships and 170 men with the express purpose of discovering a sea-route to India via the Cape of Good Hope. He had fulfilled this objective on reaching Kapukad, twelve kilometres north of Calicut on the Malabar coast, on May 17, 1498.

"What the devil has brought you here ? In search of what have you come from such a long distance ?" asked two Muslim merchants of Tunis who happened to be at Calicut when some Portuguese were sent to the latter city by Vasco-da-Gama. "We come in search of Christians and spices" was the prompt reply.[1] These were indeed the two main reasons that brought the Portuguese to India though there were other factors as well, such as intellectual curiosity, an urge for territorial expansion, and a desire to fight the Muslims wherever they were found.[2]

Initially, the Portuguese believed that the Indians had been converted to Christianity by Apostle Thomas who had come to this country in the first half of the first century A.D. No wonder therefore, that Vasco-da-Gama thought that the Malabarese were Christians and their temples were chapels. He and his men offered prayers before the image of 'Mary' in a temple in Calicut.[3] Of course the mistake was discovered during the second Portuguese visit to India in 1,500 A.D. The King of Portugal then decided to convert as many Indians to Christianity as possible.[4]

The fabulous profits involved in the trade of spices of the east, including the pepper of Malabar, were the most significant considerations for the Portuguese to come to the East.

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*This section from 1510 to 1780 has been contributed by Dr. B. S. Shastri, Panaji, Goa from 1780 to 1947 by Dr. B. K. Apte, Panaji, Goa and from 1947 to 1961 by Shri B.D. Satoskar, Caranzalem, Goa.

1 Velho A., *Roteiro da Primeira Viagem de Vasco da Gama* (Lisbon, 1940), p. 40.

2 Boleo O., *Descobrimentos Maritimos e Exploracoes Terrestres* (Lisbon, 1955), pp. 36-42.

3 Barros, pt. I, pp. 157-158.

4 Rego A. de Silva, *Portuguese Colonization in the Sixteenth Century; A Study of the Royal Ordinances* (Johannesburg, 1959), p. 26.

The spice trade, however, was under the monopoly control of the Arabs[1] since the end of the 12th century A.D. All the ports washed by the waters of the Indian Ocean along the East Coast of Africa, Arabia, Persia, India, Ceylon and Malaya and East Indies were under the Muslim commercial influence. The spices of the east were brought by ships to the ports at the Persian Gulf and the Red Sea. From these ports they were transported by land and sea to other parts of the Middle East and to Europe. Ormuz on the Persian Gulf and Aden and Jedda on the Red Sea played key roles in the transhipment of the spices to Europe where there was a tremendous demand for them. From Ormuz, they reached Europe via Damascus and Aleppo on the Mediterranean or Trebizon on the Black Sea. Merchants from Venice and Genoa purchased the articles from the Arabs at these Middle Eastern ports.

From Jedda, goods were taken by small boats to Suez from where they were carried on camel backs to Cairo. From this city the merchandise was shipped down the Nile to Alexandria. European merchants, chiefly Venetian, bought the articles at this Egyptian port. Thus the Arabs monopolized the eastern trade and enriched themselves. The Venetain and Genoese merchants, who purchased the articles from the Arabs and distributed them in Europe, also became wealthy and prosperous. The Portuguese knew very well that they could snatch all these profits for themselves if they reached the eastern shores directly and suppressed the trade monopoly of the Arabs. They achieved this objective within two decades after their arrival at the Malabar coast.

The discovery of the sea route by da Gama was not achieved overnight or in a couple of years. It was the outcome of nearly 80 years of sustained efforts at exploration of the west coast of Africa and ultimately the discovery of the sea route to the east rounding the southern tip of the dark continent.

Prince Henry, younger brother of the reigning monarch of Portugal, John I (1385-1433), captured Cueta, the Mediterranean port of Morocco in North Africa in 1415 from the Muslims. Henry settled at Cueta and organized voyages of discovery from there. The first fleet of explorations was sent out in 1419 or thereabout. Practically every year thereafter such expeditions sailed out farther and farther south. In 1434, the dreaded Cape Bojador was rounded. By 1460, the year of Henry's death, nearly half of the west coast of Africa down to Sierra Leone was explored. The Kings of Portugal con-

[1] Danvers, *Portuguese in India*, pt. I, pp. xxii-xxvii; Whiteway, *Rise of the Portugues Power* pp. 5-8; *Cambridge History of India* (Delhi, 1963), V, pp. 1-2.

tinued the task begun by Henry. In 1487-88, Bartholomeu rounded the Cape of Good Hope, sailed up the east coast of Africa for a distance, and returned with news that the sea route to India was open. The decisive step was taken in 1497 when Vasco-da-Gama was sent out with a fleet as already noticed. He carried a letter from the king of Portugal to the Samudri of Calicut.

Da Gama was received well by the Samudri. Yet the former could not establish a firm and friendly commercial relationship with the Malabarese owing to his high-handedness and the hostility of the Arab merchants who were present at Calicut. Nevertheless, he could load his ships with spices and other articles. On the return voyage he sailed along the coast northwards upto the Anjediva islands, off Karwar. He came into contact with the people of Kanara at Kundapur and Anjediva, exchanged articles with them, and collected samples of spices from them, though he does not seem to have come to know of the Vijaynagar empire. His voyage was a great success indeed. He could show his king the articles available on the west coast of India and could tell him what merchandise the Indians demanded.[1]

The second Portuguese voyage to India was in 1500 under the command of Pedro Alvares Cabral, with 13 ships and 1,200 men. Seventeen Franciscan priests and missionaries were also sent with him to convert Indians. Cabral fared no better than Vasco-da-Gama at Calicut. But at Cochin he received much co-operation from its king who was a feudatory of the Samudri of Calicut. He welcomed the Portuguese with a view to using them to gain independence from the king of Calicut. Cabral left 30 Portuguese in a factory at Cochin and returned to Portugal. It was the first Portuguese factory in India. The chief of Cannanor also welcomed the Portuguese.

In 1501 too, a fleet was sent to India. The king of Portugal had decided by then to send such a fleet every year. The fleet of 1502 was commanded by Vasco-da-Gama himself. He was ordered to block the Muslim trade between India and the Arab States, and to divert all the eastern trade to Portugal. In keeping with these instructions, he attacked every Muslim ship that he came across on the sea. At Calicut he demanded that all Muslim traders should be thrown out. The king of Calicut naturally refused. Da Gama met the refusal with wanton destruction of vessels, ports and people under the jurisdiction of Calicut. He left for Portugal after leaving several vessels to guard the coast.

In 1503 and 1504 also, the annual fleet were sent. But in 1505 the king of Portugal changed his policy of sending annual fleets.

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[1] *Cambridge History of India*, V. 4.

Instead, he decided to appoint a resident Viceroy in India for a term of three years to guard and promote Portuguese interests. Francisco de Almeida was the first Viceroy. He was instructed, *inter alia* to build forts at Anjediva and Cannanor, and to develop friendship with the emperor of Vijaynagar.

Almeida fulfilled the instructions and did much more to strengthen the Portuguese control over the seaborne trade of India. He built a fort in Anjediva in September, 1505, and another in Cannanor in 1505-8. He developed friendly relations with the chiefs of Kanara though not without skirmishes in the beginning. His friendship was sought by Emperor Vira Narasinha of Vijaynagar. His greatest achievement, however, was his victory over the combined fleets of the Sultans of Egypt and Gujarat. The Sultan of Egypt had felt the loss of profits of the eastern trade over which the Portuguese were gaining greater and greater control. He decided to join hands with the Sultan of Gujarat and oust the Portuguese from India. He sent out a fleet of 12 vessels and 1,500 men in 1507. And the combined fleets of the two Sultans worsted a Portuguese fleet off Chaul in March 1508. The Viceroy's son and 140 others were killed in the encounter. The Viceroy avenged this loss by defeating the enemy fleets in February 1509, off Diu. It marked the begining of the Portuguese naval supremacy in the Arabian Sea.

Almeida was succeeded by Afonso de Albuquerque (1509-1515), the ablest of the Portuguese conquerors sent out to the east. He conquered not only Goa but also Malacca in 1511 and Ormuz in 1515. Malacca was the key to the trade with China as well as the East Indies. Ormuz controlled the trade with the Persian Gulf. He endeavoured to capture Aden at the mouth of the Red Sea as well, but failed His successors did not achieve what he had failed to accomplish.

Portuguese Conquest of Goa

The Portuguese seem to have gathered some information about Goa, its strategic position and commercial importance, years before they took it. They also seem to have decided in 1508 to capture it. As Albuquerque says in one of his letters,[1] Marshall Fernando Coutinho, who came to India in September 1509, had royal orders to conquer Goa. However, the first conquest came about apparently without prior planning.[2] There is evidence to show that the Portuguese were invited by some Goan leaders and others to capture it.[3]

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[1] *Commentarios*, III, p. 316.

[2] Whiteway, R. S., *op. cit.*, p. 133.

[3] Pissurlencar P.S.S., "*Os Collaboradores Hindus de Afonso de Albuquerque*" *Boletim do Instituto Vasco da Gama* (Nova Goa, 1941), No. 49, pp. 5-6.

In February 1510, Afonso de Albuquerque was sailing with his fleet of 23 ships with 1,200 men along the Kanarese coast on his way to the Red Sea with a view to seeking the fleet of the Sultan of Egypt and destroying it. Timoja, who was regarded by the Portuguese as a pirate but who was actually the commander of the Vijayanagar fleet on the west coast of India,[1] met Albuquerque at the port of Mirjan in North Kanara. Whether Timoja met the foreigner on invitation or on his own is a debatable point, so also is the port where meeting took place.[2] He told Albuquerque that the latter need not go so far as the Red Sea but could find his enemy in Goa itself, because a captain of the Sultan of Egypt with some men was prepairing to oust the Portuguese from India with the help of Yusuf Adil Shah of Bijapur to whom Goa belonged and who had welcomed the Egyptians. Albuquerque was informed that the Sultan of Egypt was about to reinforce his captain at Goa, but that Goa itself was weak at the moment owing to the recent death of Yusuf Adil Shah whose successor was young and inexperienced. Timoja pointed out that the Portuguese fleet could enter the river Mandovi easily and Goa could not stand its attack. Albuquerque consulted his captains and all agreed that Goa should be attacked. Timoja offered help with his fleet and it was accepted. He informed Albuquerque later that there was no unity among the people of Goa, and that many were unhappy under the tryanny of the Adil Shah. A mendicant told Albuquerque at the mouth of the River Mandovi that some Goans prayed that Goa be captured by the Portuguese.[3]

Albuquerque's fleet entered River Mandovi on March 1, 1510, and launched upon a successful attack on the fortress of Panaji. The defenders fled and the victors plundered the fortress of arms, etc. In the meantime, Timoja successfully attacked the defences on the northern bank of the river.

Albuquerque made preparations to take the capital, present Old Goa, on the following day. However, the Adil Shahi commander of Goa, finding no hope of withstanding the Portuguese onslaught, sent words of peaceful surrender. Albuquerque agreed on condition that all the Turks and Egyptians in Goa were handed over within a day. But, that night, as he awaited the fulfilment of the conditions, Timoja brought the news that the commander had fled from the city

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[1] Barros, pt. I, p. 348.
[2] Barros, pt. II, p. 186; Castanheda, III, 19; Correa, Tomo II, Parte I, pp. 50-51; Souza, M. de Faria, *Asia Portuguesa* (Porto, 1945) I, 291.
[3] *Commentarios*, II, 117. The following account of Albuquerque's activities is based mainly on the *Commentarious;* but the accounts of Castanheda, Correa and Barros are also taken into consideration. Secondary sources like the works of Whiteway and Danvers are also referred to.

with the Turks and Egyptians, leaving their wives and children behind. Nevertheless, Albuquerque was glad to take possession of the city without a shot, on the following day, March 3. He found a large quantity of fire-arms, ammunitions, provisions and merchandise inside the fortress of Old Goa. The populace and its leaders submitted to the conqueror. He imprisoned the wives and children of the Turks and Egyptians who had run away.

Administrative arrangements for Tiswādi Island of Goa

Albuquerque then proceeded to strengthen the defences of the Island of Goa and to rearrange its administration. Timoja was disappointed at this. He had expected Goa for himself against an annual tribute of 20,000 *pardaus* to the Portuguese. He won Albuquerque's captains to his side. Albuquerque, however, firmly refused their advice as he was determined to keep the island and make it the headquarters of the Portuguese possessions in the east. He compensated Timoja by making the latter chief magistrate of all the people of Goa and by farming out to him the revenues of all the lands of Goa except the Island (Ilhas) for 1,00,000 cruzados. Timoja accepted all these as a small recompense for the service he had rendered to the Portuguese.

The people of Goa complained that the Adil Shah had imposed a harsh burden on them by doubling the revenue from 1,50,000 *ashrafis* to 3,00,000. They pointed out that many had fled from Goa on account of this. They urged him to reduce the revenue to the former level. The conqueror agreed on the condition that they would be loyal to the king of Portugal. Many of those who had gone out of Goa came back on learning of the tax concession. Some Portuguese were appointed as tanadars with local writers to help them.

Timoja and the leading merchants of Goa suggested to Albuquerque that new coins should be issued and the prices of gold and silver should be cut. Lack of their own Goan coins caused a lot of inconvenience to the local merchants. Albuquerque placed the suggestion before the captains who unanimously advised him to follow it. Albuquerque hesitated to do so without royal consent. A few days later Timoja again broached the topic and again the captains advised prompt action. Now Albuquerque accepted the advice and coins of gold, silver and copper were issued.

The Adil Shah recovers Goa

In the meantime, Ismail Adil Shah, successor of Yusuf Adil Shah, made preparations to throw the Portuguese out of Goa. By April 23, Albuquerque received intelligence of the coming attack and put his defences in readiness. The Adil Shah, however, took recourse to

diplomacy before waging a war. He offered an alternative territory along the coast if Albuquerque left Goa. He was aware of the Portuguese might and apparently intended to retain their friendship. His envoy, Joao Machado, a Portuguese renegade, warned Albuquerque that the Adil Shahi army was strong and that some Muslims of Goa regularly corresponded with the Adil Shah. Albuquerque was firm, however, in retaining Goa.

The Adil Shahi forces were gathered mainly at Banastarim, Cortalim and Dhavji. His men began entering the Island of Goa by Dhavji at night on May 16. Timoja, who was guarding the passage across the river with his men, could not prevent it. After a brief fight he was put to flight. Soon after, the Adil Shahi forces entered the island at other points as well, and put the Portuguese to flight everywhere, as the latter were far outnumbered. Albuquerque set Old Goa on fire, ordered a general killing of the Muslims, and retreated to the fort with his men with a view to continuing the fight. Within three days he was forced to abandon the fort and take shelter in his own fleet. Before leaving the fort, however, he ordered decapitation of about 150 prominent Muslim citizens who had been imprisoned in the fort. He also gathered all the arms, provisions available, as well as some of the beautiful Muslim women and children. This was on May 20. The fleet lowered the anchor in front of the fortress of Panaji where the river was at its widest. Albuquerque could not enter the sea as the bar was dangerous owing to the rains.

The Adil Shah strengthened the defences of the fort of Panaji and prepared for an artillery attack from there on the Portuguese fleet. In the meantime, he sent Joao Machado once again for a negotiated settlement, probably feeling uncertain about the safety of the fort of Panaji. Albuquerque refused peace unless Goa was returned.

The Adil Shah began to harass the Portuguese by bombarding their fleet from the fortress of Panaji. Albuquerque silenced the enemy guns with considerable loss on June 14. He cleared the fortress of the Adil Shahi defender.

Meanwhile, there was an acute shortage of provisions among the Portuguese and there was little hope of getting supplies from anywhere until the monsoon was over and the fleet could sail out into the sea. Many fell ill. Discipline could be maintained only with difficulty. A couple of attempts were made to enter the sea in June and July, but in vain.

After the loss of the fortress of Panaji, the Adil Shah prepared a fleet to fight that of the Portuguese. A naval battle ensued. Though the Portuguese won, they lost an able captain, Antonio de Noronha, Albuquerque's nephew, and many soldiers.

The Adil Shah initiated diplomatic negotiations once more. First he offered Sadashivagad with the surrounding lands on the north bank of the Kalinadi, in lieu of Goa. This was not accepted. Then he offered Goa on the condition that Timoja be handed over. Albuquerque rejected this too, saying that Timoja was too loyal a person to be sacrificed, but deserved further awards.

It was the middle of August by this time. At last the climatic conditions would permit Albuquerque's fleet to enter the sea. On August 16, the fleet left the river Mandovi and headed straight towards the Anjediva Islands. There, Albuquerque found another fleet which had just arrived from Portugal. He decided to invade Goa again after settling affairs on the Malabar coast where the Portuguese had forts at Cochin and Cannanor by then.

The Adil Shah left Goa three days after Albuquerque's departure. Disturbance ensued between the Goans and the Muslim officials left behind by the Adil Shah. Some officials were killed. All these made Albuquerque's task of recapturing Goa easier. What is more, the Adil Shah was compelled to withdraw practically all his armed men from Goa to engage them in the Deccan.

Second Conquest of Goa (15-11-1510)

Albuquerque left Malabar with a fleet of 23 ships with 2,000 men. At Honavar he received provisions and promises of help from Timoja and the king of Gersoppa. Timoja informed him that there was an army of 8,000 defending Goa, but that the Adil Shah was not in a position to send any prompt reinforcements as he was too busy fighting his enemies at the Deccan.

Albuquerque proceeded to Anjediva, spent 15 days without taking any decision on a prompt attack on Goa. He feared that he might not be able to take Goa with his 2,000 men and awaited the arrival of the forces of Timoja. The Adil Shah commander in Goa got an opportunity to put his defences in better preparedness. At last Albuquerque decided to wait no more for Timoja and attacked the city of Goa (Old Goa) on November 25.

The city and its fortress were regained after a daylong hard fight and considerable loss of life. Albuquerque allowed his men to plunder the city and ordered a general massacre of Muslims—men, women and children. The butchery lasted four days. Six thousand perished.

After taking Goa, Albuquerque apparently desired to be on friendly terms with Ismail Adil Shah. He wrote to the Shah a letter to this effect, offering trade in horses from Arabia and other articles. In the meantime, an Adil Shahi force descended from Kudal and Banda with a view to proceeding to the attack on the Portuguese in Goa.

Albuquerque despatched a few warships to the river at Banda and it worsted the Adil Shahi men. Nevertheless, the latter continued to pressurise Goa *via* the island of Divar. They were beaten off from there also. They then encamped at Bicholim. Albuquerque sought them there and defeated them once again.

Timoja had arrived at Goa with 2,000 men after it had fallen to Albuquerque. The latter had no regard for him now. The mainland territories belonging to the governorship of Goa were framed out to Melrao, elder brother of the reigning king of Gersoppa. Melrao agree to pay 40,000 *pardaus* a year in four quarterly instalments.

The capture of Goa enhanced the prestige of the Portuguese considerably. The Samudri of Calicut, the Sultan of Gujarat and the Adil Shah had been in league with a view to ousting the Portuguese. However, soon after the fall of Goa, the Samudri and the Sultan sought peace with the Portuguese, sending their respective envoys to Albuquerque in Goa. The emperor of Vijaynagar too, sent an ambassador, seeking regular supplies of Arab horses.

Albuquerque was determined to make Goa a great centre of trade. He ordered his fleet along the west coast of India to direct to Goa all merchantmen from whatever part of the world. This brought all sorts of goods, especially Arab horses to Goa made a large number of merchants to reside or establish business quarters in Goa and enabled Albuquerque to collect much funds for the royal treasury

In April 1511 Albuquerque left Goa for Malacca and captured the latter place in the same year. The Adil Shah endeavoured to regain Goa in Albuquerque's friendly overtures. Puladh Khan was sent against Goa with a large force. Melrao, whose duty included the defence of the Goa mainlands, could not resist the Khan. He fled to Vijaynagar accompanied by Timoja, who was with him.

On gaining an easy victory, Puladh Khan decided to retain the captured territory for himself, entrenched himself at Banastarim, and prepared to wage a war on the Portuguese. The latter tried to attack him at Banastarim and were repulsed. The Captain of Goa was killed in the encounter and the Portuguese territory was placed under enemy pressure. Fortunately for the Portuguese, there was no unity in the Adil Shahi court and camp. Puladh Khan had no authority to keep the mainlands for himself. The Adil Shah was annoyed at his servant and therefore superseded him by appointing Rosal Khan to lead the attack on the Portuguese.

Rosal Khan beguiled the Portuguese completely. He told them that the Adil Shah had no intention of waging a war on them, but desired friendship instead that Puladh Khan had no commission to take

Goa; that the Portuguese should help him to oust Puladh. The Portuguese extended the help sought and Rosal Khan settled at Banastarim, imprisoning Puladh there.

After some time, Rosal Khan began to demand that Goa should be surrendered to him. The Portuguese were completely taken aback. Hostilities ensued and Goa was defended with great difficulty until the return of Albuquerque from Malacca in 1512. Many *casados* conspired with the enemy against their own king. On his arrival at Goa in November, Albuquerque commenced a vigorous campaign against Rosal Khan at the Banastarim fort. It was a long drawn out battle. Albuquerque prevented provisions from reaching the Bijapuri garrison and force Rosal Khan to sue for peace just before reinforcements from Bijapur could reach Banastarim. Albuquerque conceded peace on two conditions. First, the fort of Banastarim should be surrendered along with its artillery. Second, the Portuguese deserters should be handed over. Rosal Khan's plea that the life of the deserters should be spared was heeded. The garrison was allowed to go without arms. The Portuguese entered the fort and plundered it. A number of Turks, who had been left behind, were put to death. The Bijapuri reinforcement, led by Yusuf of Lari, reached Banastarim a day after it had fallen to the Portuguese. Yusuf went away as nothing could be done.

Rosal Khan's action was apparently disapproved by the Adil Shah and the Khan sought Albuquerque's continued friendship. The latter hesitated as he desired peace with Adil Shah himself.

In the meantime, some Portuguese Captains, disgruntled with Albuquerque, wrote to the king of Portugal that Goa was of no advantage to the king; that it had an unhealthy climate, it was a source of expenses with no corresponding income; that there would be a continuous war with the powerful Adil Shah because of Goa; and that there would be peace with him, who would pay tributes if Goa were given up.

The king ordered Albuquerque to consult his advisory council consisting of captains, on the question whether Goa should be given up or not. Albuquerque was indignant at this and wrote back that it was more difficult to defend Goa against the Portuguese than against the Adil Shah. He pointed out that Goa had been captured on a royal order which was included in the instructions issued to Marshall Fernando Coutinho who had come to India in 1509; that Portuguese prestige had gone up in India only after the capture of Goa; that the Portuguese were their own masters in Goa unlike at Cochin or Cannanor; that powerful kings like the Shah of Gujarat, emperor of

Vijaynagar and the Samudri of Calicut offered sites to build forts after the conquest of Goa. The council also agreed with him and advised retention of Goa.

The emperor of Vijaynagar was anxious to ensure the supply of Arab horses from Goa. He offered help against the Adil Shah in return for a regular supply of horses. Albuquerque's reply was that Portuguese soldiers would be sent to join those of Vijaynagar to fight the Adil Shah jointly, but the emperor should pay them; that the emperor should pay 30,000 *cruzados* a year for a regular supply of horses from Goa and pay import duties in addition; and that Bhatkal or Basnur should be ceded. In reply the emperor of Vijaynagar seems to have offered £20,000 for an exclusive right to buy 1,000 horses a year. No agreement seems to have been arrived at on the issue.

Fearing an alliance between the Portuguese and the emperor of Vijaynagar against himself, and the loss of supplies of horses, the Adil Shah sent his own ambassador to establish friendship with Albuquerque and secure horses. The conqueror of Goa delayed response until a reply should come from Vijaynagar regarding his proposals. Ultimately no agreement was concluded with the Adil Shah also on the question of horses. However, he promised the Adil Shah that he would not aid Vijaynagar against Bijapur.

Administration

Albuquerque died on December 15, 1515, and was succeeded by Lopo Soares. Albuquerque did his best to safeguard Portuguese interests in the east in general and in Goa in particular. He disallowed private trade on the part of the king's servants so that the royal treasury was not affected. He introduced a system of drill for the troops to keep them fit. In order to raise a local population loyal to Portugal, he commenced the practice of marrying local women to Portuguese men in Goa. The latter came to be known as *casados*. Dwelling houses, cultivable lands, provisions and Government jobs were given to the *casados* to enable them to begin their settled or married life. The offspring of such marriages was rightly expected to be loyal citizens. The Portuguese could recruit such men in the army and the navy, and thus raise a defence force locally.

Albuquerque built a church in honour of St. Catherine on whose day, November 25, Goa had been finally captured. The church rose to be the See Cathedral in course of time. He also founded a hospital endowed from the lands belonging to Mosques. In 1511, he established a municipal council for Goa. He also banned the practice of *Sati* among the Hindus of Goa.

Acquisition of Bardez and Salcete

No peace prevailed between Goa and the Adil Shah for decades to come after the death of Albuquerque. The net outcome of the series of hostilities was the acquisition of Bardez and Salcete by the Portuguese in 1543. In the meantime, these territories changed hands several times between them.

In 1516 hostilities broke out between the Portuguese and the Adil Shah for which the Portuguese themselves were responsible. Goterro, captain of Goa, intensely disliked another official, Fernao Caldeira. The latter took shelter in Ponda under the Adil Shah. Goterro managed to get Fernao murdered through agents. But the murderers were caught and put to death by the Adil Shah authorities. Goterro attacked Ponda as a measure of retaliation. He however, was worsted. A few months later, the Adil Shahi forces numbering about 30,000, encircled Goa itself. The preliminary encounters went against the Portuguese once again. However, the enemy attempts to enter the Island of Goa were beaten off. In the meantime, reinforcements arrived from Portugal and the Adil Shah raised the siege.[1]

In 1520, while the Adil Shah and the emperor of Vijayanagar were at war with each other at Raichur, the Portuguese captured the mainland territories of Bardez, Ponda and Salcete at the instance of Krishna Deva Raya, emperor of Vijayanagar. The Adil Shah could not prevent it owing to his own weakness as a result of a defeat suffered at the hands of the emperor of Vijayanagar. The Shah recovered the lands only a couple of years later.[2]

In 1532 occurred the first of a series of events culminating in the acquisition of Bardez and Salcete by the Portuguese. Ashad Khan, formerly Yusuf of Lari, and his master Ismail Adil Shah, fell out for some time. Ashad Khan was the governor of Belgaum. He was powerful and wealthy. Ponda, Bardez and Salcete came within his jurisdiction. In order to strengthen himself against the Adil Shah, the Khan sought Portuguese assistance. He offered them Bardez and Salcete in return for their help. The Portuguese accepted the offer eagerly and occupied the areas promptly. Thereby their treasury was enriched to the extent of 50,000 *pratapas* a year.

In 1534 Ismail died and was ultimately succeeded by one of his sons, Ibrahim. Ashad Khan was on good terms with the new Shah. He regretted that he had given up Bardez and Salcete to the Portuguese. He asked

[1] Castanheda, IV, pp. 392-393, 408-410, 414-419; Correa, II, pp. 509-517; Barros, III, pp. 41-44; Whiteway, 186-188; Danvers, I, 336-337.

[2] Castanheda, V, 90-91; VI, 211-213; Correa, II, 658-659; Barros, III, 189-202, 395-399; Danvers, I, 356 ; Saldanha M.F.G. de *Historia de Goa* (Nova Goa, 1925), I, 53.

them to return the territories. The Portuguese refused. The Khan then launched upon a series of attacks on them with a view to recovering the lost territories. The Portuguese strengthened themselves in their new acquisition by building a fort at Rachol in Salcete. For some time, therefore, they could withstand the Khan's repeated attacks on them. In 1536, the Khan personally led a strong army of about 10,000 men against the Portuguese fort. The captain of the fort sought reinforcements from the Governor of Goa. The Governor could not send enough and what he sent was not only inadequate but too late. The fort could not be defended. The Governor of Goa decided to negotiate and come to terms with the Khan. There was one important reason for this decision. The governor was at this stage more interested in acquiring Diu from the Shah of Gujarat. He required all the men at his command for the purpose. Accordingly, he spun out negotiations with Asad Khan, destroyed the fort of Rachol and retreated. Both Bardez and Salcete were returned to the Khan.[1]

Events leading to the final acquisition of Bardez and Salcete

Soon after this event, relations between Ibrahim Adil Shah and Asad Khan seemed to have become uneasy. The Khan advised the Portuguese to bring Mir Ali, Ibrahim's uncle and rival claimant to the throne of Bijapur to Goa. Mir Ali had been residing at Diu. The Portuguese obliged the Khan for a substantial monetary consideration. Ibrahim became uneasy at the presence of his rival in Goa and was angry with Ashad Khan. He sent an army against the Khan and an envoy to Goa. Both the Shah and the Khan vied with each other for the Portuguese help against each other. Ibrahim appealed to friendship. The Khan offered two million in gold. Ibrahim offered to cede Bardez and Salcete. The Khan stirred up a revolt in these lands to show how difficult it would be for the Portuguese to administer the lands and collect revenue. The Portuguese thus found themselves between the horns of a dilemma. At the end, they preferred Ibrahim's side as they coveted Bardez and Salcete. They signed a treaty with him in 1543 whereby the territories in question were ceded to them. They agreed to send Mir Ali away to Malacca. This condition however, was never fulfilled by them. Yet Bardez and Salcete remained with them until 1961.[2]

Thus, among the lands now included in the Union Territory of Goa, Daman and Diu, the Portuguese captured the Island of Goa or Tiswadi, Bardez, Salcete, Diu and Daman in the 16th century. They

[1] Castanheda, VIII, 284-285, 374-377, 401-405, 421-427, 438-443, 449 ; Whiteway, 231-232 ; Correa; III, II, 462-464, 642-649, 690-699, 707-710, 741-742, 756-762; Barros, IV, 393-395, 401-431; Danvers, I, 413-416.

[2] Correa, IV, I, 314-324, 331-336; Whiteway, 285-289; Danvers, I, 464-466.

also captured other Indian territories in the same century—Bassein, Chaul, Honavar, Bassur, Mangalore, Cannanor, Cochin and Quilon on the west coast; some lands on the east coast and some in Bengal. We are not concerned with these here. By the end of the 18th century, they secured the remaining parts of the Union Territory, namely, Anjediva,[1] Ponda, Canacona, Sanguem, Bicholim, Satari and Pernem. These are known as the New Conquests. We have to narrate how these were acquired. But before doing so we may study how the Portuguese defended and administered their territories until the 1780's.

The conquest of Diu and Daman is described separately in the respective Chapters in parts of the Gazetteer dealing with Diu and Daman.

The Adil Shah of Bijapur decided to take advantage of Castro's absence in Diu and intruded into Bardez and Salcete. He had a grudge against the Portuguese who had failed to send his rival, Mir Ali, to Malacca as required under the treaty of 1543. However, Castro drove back the Adil Shah forces easily.[2]

In 1570 a grand alliance[3] against the Portuguese was entered into among the Adil Shah of Bijāpur, the Nizam Shah of Ahmednagar and the Samudri of Calicut. The Portuguese believed that the alliance was the result of an appeal from the king of Persia to the princes of the East to unitedly attack them with a view to expelling them from this part of the globe. The alliance was joined also by other chiefs like the Queen of Gersoppa in North Kanara, the Queen of Ullala near Mangalore in South Kanara, and the king of Achin in the East Indies. The principal allies were so sure of their success against the Portuguese that they specified their respective shares of the Portuguese territories to be conquered. The Adil Shah was to get Goa, Bardez, Salcete, Honavar and Basrur (Kundapur). The Nizam Shah's share was Chaul, Bassein and Daman. The Samudri was to have Mangalore, Cochin, Cannanor and Chale. The allies were to attack independently,

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[1] In a way the Anjediva islands had been a Portuguese territory since the days of Vasco-da-Gama who halted there in 1498 on his return voyage to Portugal. Francisco de Almeida built a fort there in 1505, but destroyed it in the following year as he found the defence of the place difficult. Nevertheless, the Portuguse continued to use Anjediva for various purposes such as to repair their vessels there and to secure supplies of potable water and provisions. In 1662 the English occupied Anjediva, but vacated it by 1665. In 1682, Sambhaji, the Maratha King, planned to occupy the place. The Portuguese forestalled him by fortifying it early in the same. Thereafter it remained with them until 1961.

[2] Whiteway, *op. cit.*, p. 314.

[3] For a detailed study of the alliance and the subsequent wars, one may read Antonio do Castilho, *Commentario do Cerco de Goa e Chaul no anno de 1570 sendo viso-rei D. Luis de Ataide* (Lisboa, 1736); Antonio Pinto Pereyra, *Historia da India no tempo em que o governou Visorey Dom Luis de Ataide* (Coimbra, 1616); Danvers, I, 551 70.

but simultaneously, various possessions of the Portuguese. The Adil Shah was to invade Goa: Chaul was to be attacked by the Nizam Shah; and the Portuguese forts of Malabar were to be assaulted by the Samudri. It was a great threat indeed; but the Portuguese under the viceregal leadership of Luis de Ataide, rose to the occasion and defended themselves successfully. It was a remarkable achievement, considering the strength of the enemies and their simultaneous attacks at various points.

Ten years later, Portugal came under the sovereignty of the King of Spain, Philip II. The Spanish domination prevailed until 1640. During this period of 60 years the Portuguese suffered losses of commerce as well as territories in the East. These losses were inflicted on them mainly by the Dutch. The latter regarded the Portuguese as enemies because Portugal belonged to the King of Spain from whom the Dutch were struggling, since 1568, to become independent. There was some hostility between England and Portugal too because England was helping the Dutch to get rid of the Spanish yoke. Besides, the British had an eye on the eastern trade over which they were bound to clash with the Portuguese sooner or later. But when the Dutch became strong in the East, the English entered into peace treaties with the Portuguese in 1635 and 1661.

The Dutch sent out their first fleet to trade with the East Indies in 1597. During the return voyage, it touched Malabar. Two more fleets, one in 1598 and the other in 1601, were sent out to the East. But there was no unity among the Dutch merchants which led to rivalry in making purchases and consequent rise in prices. A united company was established in March 1602 with a huge capital, trade monopoly from the Cape of Good Hope to East Indies, power to wage wars on the Portuguese, and right to enter into treaties with local chiefs.[1] That very year a fleet was despatched to the East and some Dutch merchants were landed at Surat. From there these merchants proceeded to Malabar to secure pepper. In Malabar, however, the Portuguese seized them, brought them to Goa and put them to death. A Dutch fleet which sailed out in December 1603, blocked the Goa bar in September-October 1604, and confronted the Portuguese fleet there as well as at Malabar. What is more, on November 11, the Dutch and the Samudri of Calicut entered into an alliance against the Portuguese and avowed never to come to peace with the latter.[2]

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[1] Boxer C.R., *The Dutch Seaborne Empire* (1600-1800), New York, 1965, pp. 22-24

[2] Poonen T.I., *Dutch Beginnings in India Proper* (1580-1615), University of Madras, 1933, pp. 5-8; Pissurlencar P.S.S., *Fragmentos Historicos*, I, *Rivalidade Luso-Holandesa na India durante a Dominacao Felipina, Boletim do Instituto Vasco da Gama*, pp. 59, 61.

Blockading the Goa bar from year to year became a regular feature of the Dutch-Portuguese rivalry in the East. The Dutch purpose was to prevent the free movement of Portuguese ships into and out of the Mandovi river. The Dutch proved to be superior in naval confrontations more often than not and the Portuguese received considerable damage. Military and naval strength of the Portuguese waned as years rolled by. Their commerce was ruined. Much of their territories were lost.

In 1614, the Mughal emperor, Jahangir, and the Portuguese were not in good terms. The Mughals invited the Dutch to help them in expelling the Portuguese from Diu and Daman. The Dutch were to get Daman in return for the help. But on their arrival at Surat in 1615, the Dutch found that there was peace between the Mughals and the Portuguese.[1]

Muhammad Adil Shah of Bijapur, who had his own grievances against the Portuguese, entered into an alliance with the Dutch against them in 1637. It was agreed that the Adil Shahi forces should attack Goa by land while the Dutch would blockade the Goa bar in September. Goa and its neighbouring lands were to belong to the Adil Shah, if successful, and the Dutch were to get a place and many privileges in the kingdom of Bijapur.[2]

The Dutch blockade of the Goa bar was in fact frequent and effective during the year 1636-1641. In 1639, they burnt three Portuguese warships at the Mormugao harbour. Those were the best warships the Portuguese had. Indeed in the 1630's their losses were heavy. It is estimated that during 1629-1635 they lost 1,499 men and 155 ships in their confrontation with the Dutch in the East. During 1635-1639 the Portuguese loss in terms of fighting men was 4,000 ; and only 500 came from Portugal to replace the killed. A number of territories were lost in Ceylon to the Dutch by 1640. Malacca fell to the latter in January 1641. However, a 10 year truce was concluded in the last mentioned year. Yet hostilities continued in India and Ceylon until 1644. Goa was blockaded by a squadron of Dutch ships from 1641 to 1644 too[3]

The Dutch and the King of Spain concluded a peace treaty in 1648 ; but Dutch-Portuguese hostilities continued and became intense in 1652 and thereafter on the expiry of the ten year truce of 1641, peace came only in 1668-69. By then the Portuguese lost the whole of Ceylon and all the forts and territories along the west coast of India, south of Goa. Already, the commercial activities of the Portuguese were

[1] Pissurlencar, *Fragmentos Historicos*, pp. 64-65.

[2] *Ibid.*, pp. 67, 71-72.

[3] Boxer C.R., *Portuguese and Dutch Colonial Rivalry, 1641-1661 Studia* (Lisbon, July, 1958), pp. 13-18.

in shambles. Thus at the end of the rivalry, the Portuguese were left exhausted in the East. Their territorial possessions shrank to Diu, Daman, Bassein (excluding the islands of Bombay which they had ceded to the English in 1661-65), Chaul, Bardez, Salcete and the Island of Goa or Tiswadi. All the remaining areas were lost either to the Dutch directly or to some Indian princes encouraged by the Dutch.

Even before their disastrous rivalry with the Dutch came to an end, the Portuguese had to face the Marathas in the 1660's and thereafter. However, we shall discuss Portuguese-Maratha relations after considering some important aspects of the social, economic and administrative activities of the Portuguese.

Spread of Christianity

The religion of the king should be the religion of the subjects was the prevailing view in the 16th century Europe. Naturally therefore, it was the official policy of the King of Portugal to convert non-Christians within the territories under his control.

Goa and other territories in the East were included in the diocese of Funchal created in 1514. Funchal was the town in the island of Madeira, belonging to the Portuguese, off the north-west coast of Africa. The King of Portugal was authorised by the Pope to present candidates for the ecclesiastical posts to be filled in this diocese. At the same time, the king was obliged to maintain church establishments and spread the Catholic faith. In 1534, Goa itself became a bishopric with jurisdiction over all lands east of the Cape of Good Hope. The first bishop of Goa however, came only in 1538. Twenty years later Goa became an archbishopric with the suffragans of Cochin and Malacca. The suffragans of Macao, Punai (in Japan) and Mylapur (near Madras) were added to the archbishopric of Goa in course of time. The Archbishop of Goa and his suffragans met from time to time in assemblies known as Provincial Councils with a view to consider measures to promote Christianity. Several such Councils were held. The first was in 1567. It was followed by the Councils of 1575, 1585, 1592 and 1606. After this there was no Council for about 250 years.[1]

The conversion of Goans to Christianity was largely the work wrought by various religious orders who came to this land in the 16th century. The Franciscans were the first ones to come. Towards the end of 1517, nine Franciscan friars headed by Fr. Antonio do Louro arrived there. By the end of 1518, they claimed to have

[1] D'Costa A., *The Christianisation of the Goa Islands : 1510-1567* (Bombay, 1965), pp. 18-19.

converted some 800 Goans.[1] The Franciscans were followed by the Jesuits in 1542 and by the Dominicans in 1548. Augustinians and others came later.

Until 1540 there was apparently no conversion based on persecution. Of course, Afonso de Albuquerque's policy of mixed marriages led to the conversion of many a Hindu and Muslim women to Christianity. The Franciscans converted people by persuasion and offer of incentives of livelihood. As a result of their efforts the whole village of Dhauji became Christian by 1540.[2]

A policy of persecution was inaugurated when non-Christian abodes of god in the Island of Goa (Tiswadi) were destroyed. A suggestion to this effect had been made as early as 1522 by Duarte Nunes, Bishop of Funchal, who was on a visit to Goa. He also proposed that all non-Christians should be converted or be made to leave the island.[3] But the King of Portugal did not accept these suggestions at the time. In 1540, however, a decision was taken to destroy temples and mosques. How exactly the destruction was brought about is not known. But an Italian Jesuit, Nicolau Lancillotto, visiting Goa in 1545 could report that there was no temple to be seen in the island.[4] The temples of Bardez and Salcete were destroyed in 1567. The devotees took the images of the deities from the destroyed temples to the neighbouring territories like Ponda and Bicholim, which were not yet under the Portuguese, and installed them in newly constructed temples there. By the time the Portuguese conquered these lands also, the zeal for conversion did not exist, and these temples survived.

In 1541, the Confraternity of Holy Faith was established. Its objects were to help poor Christians, to maintain churches, to maintain the College of St. Paul, to hinder the erection of new temples or the repair of old ones, to prevent non-Christians from harassing Christians or leaving Christian relatives destitute, and to get Christians preferred in Government employment.[5] A portion of the endowment grants belonging to the destroyed temples was made over to the Confraternity for its expenses. In 1548 the Jesuits took charge of the Confraternity and obtained all such grants.[6]

Several laws were passed during 1540-45 to hinder the religious practices of non-Christians. It was "a serious offence to fashion, or

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[1] Rego A. da Silva, *Historia das Missoes do Padroado Portugues do Oriente : India* (Lisbon, 1949), I, 249-250.

[2] D'Costa, *op. cit.*, pp. 163.

[3] Rego A. da Silva, *Documentacao para a Historia das Missoes do Padroado Portugues do Oriente : India* (Lisbon, 1947), I, 452.

[4] D'Costa, *op. cit.*, pp. 30-32.

[5] *Ibid.*, pp. 32, 33.

[6] Whiteway, *op. cit.*, p. 61.

even to privately retain, Hindu religious objects; Hindu houses were liable to be searched on suspicion that they harboured such things; all public celebration of Hindu feasts was forbidden; no one was to receive in his house Hindu priests from outside the islands; finally, Hindu painters were not allowed to exercise their art on Christian themes "[1]. The enforcement of these laws however, depended upon the religious attitude and character of the governors. Several of them were opposed to the policy of persecution.

In 1567 the first of the provincial Councils of Goa was held. A law was enacted by the government of Goa on December 4, to give effect to the decisions of the Council. "All heathen temples in Portuguese controlled territory should be demolished; that the name of the Prophet Muhammat should not be invoked in the Muslim call to prayer from a mosque; that all non-Christian priests, teachers and holy men should be expelled; and that all their sacred books, such as the Koran, should be seized and destroyed whenever found. Hindus and Buddhists were prohibited from visiting their respective temples in the neighbouring territories, and even the transit passage of Asian pilgrims to such places was forbidden. A ban was also placed on that ritual bathing which is such a feature of Hinduism.

"The public celebration of non-Christian marriage ceremonies and religious processions was strictly forbidden. No conversions were allowed from Islam to Hinduism or to Buddhism, and *vice versa*, but only from these religions to Christianity. Monogamy was decreed for everyone, irrespective of their religion. Men who were already having more than one wife (or cohabitating with more than one concubine) were ordered to dismiss all save the one whom they had first married (or to make a lawful wedded wife of one of the concubine). All orphaned Hindu children were to be taken, if necessary by force, from the relatives with whom they were living and were to be handed over to Christian guardians or foster-parents and prepared for baptism by Catholic priests. If either of the partners in a pagan marriage was converted, the children and the property were to be given into his (or her) keeping. Christians were not allowed to live or lodge with non-Christians, nor the former allowed to have other than strictly business dealings with the adherents of other creeds. Nominal rolls were to be made of all Hindu families, and these latter were to be sent in groups of fifty to hear Christian propaganda in the local churches and convents on alternate Sundays. A sharply increasing scale of fines was levied on those who tried to evade these obligations. Non-Christians were to be officially and legally discriminated against and converts equally favoured, in competition for

[1] D'Costa, *op. cit.*, p. 34.

such public offices and remunerative posts which were not reserved (as many were) for Christian converts only "[1].

These discriminatory and coercive measures led many to become Christians. "Deprived of their priests, teachers, holy men, sacred books and public places of worship, not to mention the free exercise of their respective cults, it was confidently expected by the legislators of 1567 that 'the false heathen and Moorish religions' would wither and die on territory controlled by the Portuguese Crown."[2] Additional measures were introduced and some were relaxed later according as the subsequent Provincial Councils decreed. Those who were converted under compulsion might not have been good Christians, but their progeny was. The zeal of some missionaries and governors led to the migration of many industrious people from Goa with consequent adverse effect on Goan economy. Some rules were relaxed to enable many to come back to Goa. In fact, the enforcement of these measures were less rigid after 1570. The Dutch Calvinist, Linschoten, who was in Goa in 1583-89, states that Non-Christians were allowed freedom of conscience provided they performed their religious rites within closed doors.[3]

Under a decree of 1559, non-Christian orphans were to be baptized. The orphans were defined as those children who lost both their parents and both grandparents. However, in practice all children who lost their father were regarded as orphans and baptized. This involved much bitterness and the definition of 1559 was enforced after 1678. There was also ambiguity regarding the age of the orphans. A vice-regal decree of 1718 laid down fourteen years for boys and twelve for girls.[4]

By the end of the 16th century, the Portuguese zeal for spreading Christianity subsided. During the century, however, their conversion policy led to a Christian population of probably more than 50,000 within the region of Tiswadi, Bardez and Salcete. There was a small Christian population in Daman, but virtually no Christianity in Diu as Hindus and Muslims were tolerated there under the treaty of 1537.[5]

Administrative System

There was absolute monarchy in Portugal until 1820. The king and his council of ministers controlled the Portuguese affairs in India and elsewhere through Governors and Viceroys. An "India House"

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[1] Boxer C.R., *The Portuguese Seaborne Empire*, 1415-1825, pp. 67-68; Whiteway *op. cit.*, pp. 66-67.
[2] *Portuguese Seaborne Empire*, p. 68.
[3] *Ibid.*, p. 69.
[4] *Ibid.*, pp. 74-75.
[5] *Ibid.*, p. 79.

located in Lisbon looked after trade and commerce, shipping and navigation between Portugal and India. A factor, a treasurer, an accountant and a revenue magistrate were its chief officers.

The highest officer sent from Portugal to administer Portuguese territories in India was a Governor or Viceroy. The latter title indicated the higher social status of the incumbent; but there was no difference in the nature of powers exercised. Usually the tenure of the Governor or Viceroy was three years. But there were exceptions Afonso de Albuquerque was Governor from 1509 to 1515. Nuno da Cunha held office from 1529 to 1538.

The incumbent was entrusted with civil, judicial and military authority. He was assisted by a Secretary of State appointed by the king.

The Governor (viceroy) had an Advisory Council. It was purely an official body, but was expected to check the autocracy of the Governor. This it could hardly do when the Governor was a powerful man. The origins of the Council of State can be traced to the captains of ships whom Afonso de Albuquerque gathered around him for consultation. In 1604, its composition was determined by a law: the Governor was its president; the archbishop, the captain of the city of Goa (Old Goa), the Chancellor and the Controller of Finance were its members; in addition, the Governor could invite important nobles to attend.[1]

During the 16th century, the Portuguese had a large number of territorial possessions along the coast of Africa, Asia and Latin America. Goa was the headquarters for the possessions from the Cape of Good Hope at the southern tip of the African Continent, to Malacca in the East Indies. The jurisdiction of the Governor (viceroy) stationed in Goa extended to these lands of Africa and Asia. Attempts were made to have several independent Governors for African, Indian and East Indian possessions. They did not prove successful and therefore the Governors (viceroys) in Goa administered all eastern possessions of the King of Portugal.

The Indian possessions themselves on the west coast were divided into three groups: (a) the province of the north consisted of Diu, Daman, Bassein and Chaul. Bassein was its capital; (b) Goa with Tiswadi, Bardez, Salcete and Anjediva formed the middle province. Old Goa was its capital, (c) The province of the south consisted of territories in Kanara and Malabar. Cochin was its capital. Each division was guarded by a fleet headed by a Captain-Major.

[1] Gracias J. A. Ismael., (ed), *Carta Organica das Instituicoes Administrativas nas Provincias Ultramarinas* (Nova Goa, 1899), p. 67 footnote (2).

The southern province was lost to the Dutch during the first half of the 17th century. In the northern province the Portuguese lost Bassein, Salcete and Chaul to the Marathas in 1739-40. The Bombay islands had been ceded to the British in 1661-65 as part of the dowry for the marriage between a Portuguese princess and Charles II of England, thus only Diu and Daman remained in the northern province.

In the last quarter of the 18th century, the middle province was expanded by the inclusion of Pernem, Bicholim, Sanquelim, Satari, Sanguem, Ponda and Canacona.

The fortress-factory system[1] was the backbone of the administration of Portuguese colonies. The system was at once military, administrative, commercial and religious in nature. Usually the following officers were to be found at each fort : a captain, a factor, a writer or secretary, one or more judicial officers, a surgeon, a linguist, a chief artillery officer, and several church officials headed by a vicar. The captain was in charge of the fort. At first he used to be appointed directly by the king of Portugal ; but later the governor appointed him. Usually, the captain was a man with civic and military services of long standing. He was appointed for a term of three years. Sometimes the captain was the factor too.

Each fort had a factor as most of the forts were trading centres. The factor was appointed by the Governor for a term of three years. The writer or secretary was also appointed by the Governor.

A church was invariably attached to a fort for the benefit of the garrison and other Christians around. The government spent a lot of money to maintain the church and its dignitaries. The church was a centre of missionary activities too.

Judiciary

A judicial officer known as *Ouvidor Geral* used to dispense both civil and criminal justice in Goa in the first few decades of the 16th century. In 1544, a High Court headed by a Chancellor was established. Its jurisdiction covered all territories over which the governor's jurisdiction extended. The number of judges in the high court varied from time to time. It was ten in 1587, five in 1628 and six in 1748. The high court was abolished in 1774. The *Ouvidor Geral* became once again the sole judicial authority at the highest level. But this was only a temporary arrangement. In 1778, the High Court was revived. It was thoroughly reorganised in 1836.[2]

[1] The description of the fortress-factory system is based on (1) P.S.S. Pissurlencar (ed), *Regimentos das Fortalezas da India* (Bastora, 1951), (2) Diogo Velho, *Orcamento do Estado da India* (1574), Lisbon, 1960, (3) Francisco Paulo Mendes da Lus (ed), " *Livro das Cidades e Fortalezas* ", *in Studia*, No. 6, July, 1960, Lisbon.

[2] Gune V.T., *A Guide to the Collection of records from the Goa Archives*, Panaji (Panaji, 1973), p. 24.

Comunidades or Communities were assemblies which administered villages. These institutions existed in Goa even before the conquest of Goa by the Portuguese. The conquerors preserved the communidades with some modifications. The usages of the villages of Tiswadi (Ilhas) were codified as early as 1526.

The difference between the income and the revenue of the village community was distributed among *gaonkars*. A *Kulkarni* kept accounts of the village.[1]

The municipality of Goa was founded by Afonso de Albuquerque in 1511.[2] It consisted of ten members with voting rights : one alderman of higher nobility (*vereador fidalgo*), two aldermen of lesser nobility (*vereadores nobres*, two justices of peace (*juizes ordinarios*) the attorney of the city (*procurador da cidade*), the four attorneys representing the guilds of craftsmen (*procuradores dos mesteres*).[3] The number of members however, varied from time to time. It was seven under the Act of 1842 and nine under that of 1917.[4] The members were elected[5] or selected[6] from among the *casados*, namely, the Portuguese men who married local women and settled down in the city, and their descendants. The captain of the city of Goa, an employee of the crown, had the right and the duty to attend the meeting of the chamber whenever he thought fit or whenever he was invited. The charter of privileges granted to the *casados* by Albuquerque was confined by the king in 1518 with some modifications. They were allowed freedom of trade, except in pepper and some other royal monopolies. Almost all municipal offices were reserved for them and their descendants. Neither the governor nor any other authority was to interfere in the day to day administration of the municipality.[6] The charter was confirmed from time to time and additional privileges were granted to the *casados*, and their municipality.

The members of the municipal chamber or senate (*senado*) were elected by a complicated procedure, for a term of one year. The representatives of the craft guilds were elected indirectly. The guilds elected a council of twelve representatives and these twelve in their turn elected four among themselves to the municipality.[7]

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[1] Gune, *op cit.*, pp. 14-15.
[2] *Ibid.*, p. 15.
[3] Boxer C.R., *Portuguese Society in the Tropics* (Wisconsin, 1965), p. 12.
[4] Gune, *op. cit.*, p. 16; A.C.B. de Albuquerque, *O Senado de Goa*, (Nova Goa, 1909), p. 5.
[5] Albuquerque, *Senado de Goa*, *p.* 3.
[6] Boxer, *Portuguese Society*, p. 13.
[7] *Ibid.*, pp. 5-8, 16-17; *Portuguese Seaborne Empire*, pp. 274-275, 279.

The *vereador fidalgo* presided over the meetings which were held twice a week or more often whenever it was necessary. The municipality had the privilege of corresponding directly with the king of Portugal. The latter welcomed it as he could keep himself informed of the doings of his servants in India. The chamber used to complain to the king whenever its privileges were violated by the governor or any other authority and the king used to take the complaints seriously and warn the authority concerned.[1] The chamber used also to tender advice to the governor or even the king on matters of high policy, including war and peace. For example, on 9th May, 1654, the municipality submitted a memorandum to the governor urging him to conclude peace with Shivappa Nayaka of Keladi "with the greatest speed that is possible," so that food and other supplies from the kingdom of Keladi could come to Goa which was suffering from acute scarcity, and the men, money and equipment being employed against Shivappa could be diverted against the Dutch who were more dangerous enemies.[2]

Some governors resented the privileges granted to the municipalities. Conde de Linhares, viceroy, advised the king in 1632 to abolish the municipality saying that cities without municipalities were better governed. It was an exaggeration and the king did not accept the advice. However, it must be noted that the governors and the municipalities were not always at logger heads, but that they co-operated with each other. Joao de Castro, Governor, could get a loan from the municipality of Goa in 1546 on the simple security of a hair from his beard. And on several occasions it extended financial aid to the government for various purposes.[3]

The routine functions of the Goa municipality included maintenance of city fortifications, regulation of trade by fixing prices and issuing licences, and helping the poor. The variety of its day to day functions and how they were distributed among its members can be understood better from the provisions of the constitution of the municipality promulgated in 1842. The chamber consisted of 7 members, one of them was its president and another, vice-president. The municipal functions were divided into 7 categories and each was entrusted to the care of a member :[4] (1) Secretariat, municipal works, cemetries and the chamber building ; (2) slaughter houses and butchers' shops ; (3) merchants, fairs and markets ; (4) lighting and arborisation ; (5) cleanliness, watering the streets and construction of pavements ; (6) municipal establishments and gardens ; and (7) supply of potable water, fountains and wells.

[1] Boxer, *Portuguese Society*, p. 17.
[2] *Assentos*, III, pp. 333-337.
[3] Boxer, *Portuguese Society*, pp. 18-19,
[4] Albuquerque, *Senado de Goa*, p. 5.

The income of the municipality was derived mostly from its landed properties and buildings leased to shopkeepers, etc. But its income usually tended to fall short of its expenditure as it was compelled to give loans to the crown and to finance government projects. It used to borrow from the holy house of mercy to make up the deficit. It repaid the loan slowly and sometimes only partly.[1]

The holy house of mercy was a charitable institution. Its functions were[2] (1) giving food to the hungry, (2) giving drink to the thirsty, (3) clothing the naked, (4) visiting the sick and prisoners, (5) giving shelter to the weary, (6) ransoming the captives, and (7) burying the dead. It maintained hospitals. The charity of the house was meant mostly to the Christian community of the locality.

The membership of the Governing Board of the house was as prestigeous as that of the municipal chamber. Men of standing and wealth aspired to be members of one or the other, if not of both. The board consisted of elected officials for a term of one year. Its president was expected to be a man of authority, prudence, virtue and good reputation. He was also expected to be a 'gentleman of leisure' so that he could devote much time to its service. But governors, archbishops, inquisitors, captains, secretaries of state, high court judges and other state officials became presidents. On such occasions the secretary of the board had to do most of the work.[3]

The number of members which constituted the brotherhood of the house varied from time to time. The house began with 100. It rose to 400 in 1595 and to 600 in 1609. The law did not permit more.[4] The brotherhood elected the governing board annually.

The house gathered its funds mostly from private charity and legacies. Many a man and woman on their death beds bestowed much to the house so as to purchase heavenly mercy for their sins. Pure philanthropic motives also led to gifts and donations to the house. The vast funds at the disposal of the house enabled it to give loans to the crown and the municipal chamber.

The brotherhood of the house was open only to white men for centuries. It was only in 1720 that a full blooded Goan Christian was made member of the house.[3]

The organization of the Portuguese army in Goa was unenviable. Until 1671 there was no standing army. Soldiers were recruited when necessary and were disbanded when the purpose was over. There was neither drill nor training except under Albuquerque and a few

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[1] *Portuguese Seaborne Empire*, pp. 282-284.
[2] *Ibid.*, p. 288.
[3] *Ibid.*, p. 289.
[4] *Ibid.*, p. 287.

other able governors. The recruitment was unworthy of emulation. In addition to nobles and free citizens, a large number of criminals, vagabonds and other bad elements of society were recruited in Portugal and sent to Goa and other colonies. The recruits were provided with some ration during the voyage. But they were given their first pay three or six or even twelve months after their arrival in India. Nor were they given immediate work on arrival in the colony. The poor recruits therefore depended upon some nobleman for maintenance until the pay day. Or they bagged or robbed or deserted.[1]

The recruits received either the *soldo* or the *ordenado*. *Soldo* was the basic pay of a man's rank. It varied in proportion to his experience, noble birth, etc. *Ordenado* was the pay of an appointment such as governorship or captaincy. One who received the *soldo* was given *mantimento* too. *Mantimento* was a subsistence allowance in money or kind or both. Those who received *ordenado* were not entitled to the *mantimento*. In the beginning a soldier was paid at the time of embarkation at Portugal. After 1540, he had to wait in Goa for months before he was given his first pay. Besides, the pay was irregular and almost always in arrears.[2]

The character of the majority of the recruits, their poor equipment. lack of training and poor pay, led to a lack of discipline among them. Robbing, thieving, lying and sexual excesses were frequent. Soldiers marched without order, attacked without plans. quarrelled over the booty.[3]

Goans used to be recruited in the army. But the Portuguese treated them contemptuously as weaklings. The native recruits were known as *lascarins* or *Canarins*.[4]

The first regular army was instituted in India in 1671. It was known as infantry regiment. However, it did not last more than a few months. In 1683, a cavalry was raised. It was to defend Bardez and Salcete. In 1735, a special regiment was established. All Goans were made liable to military service.[5]

Navy

The Portuguese navy in the east was headed by the governor or viceroy who was termed Captain-General. The navy was divided under several Captain-Majors for defence of different territorial divisions. There was a fleet to guard the southern province from Goa to Malabar, another for Goa itself and a third for the northern province from Chaul to Diu. Each ship carried 20 to 25 guns. Sometimes, the number of guns was more.

[1] *Portuguese Seaborne Empire*, pp. 297-301; Whiteway, *op. cit.*, pp. 73-74.
[2] *Ibid.*, p. 297; Whiteway, *op. cit.*, p. 72.
[3] *Ibid.*, pp. 299-300.
[4] *Ibid.*, p. 301.
[5] Gune, *op. cit.*, p. 28.

The Portuguese ships were the best in the 16th century world. Their carracks and galleons were of about 400 tons. Further, during the first half of the 16th century, on an average 7 to 140 ships were sent to Goa every year. By the middle of the 16th century, the tonnage of ships ranged from 600 to 1,000 and the number sent to India averaged five By the close of the century the Portuguese had several vessels of 2,000 tons each.[1]

There was a shipyard at Old Goa where numerous vessels were built during the 16th and 17th centuries. The Indian teak was far better than European pine and oak for shipbuilding. The teak ships built at Goa were better and lasted longer compared with European vessels. A Goan built ship could last for a quarter of a century and perform nine or ten round voyages between Portugal and India. On the other hand, European built vessels lasted a decade on an average and made not more than 3 to 4 round voyages. However, the Goan built ships were costlier than those built in Europe.[2]

It is estimated that during the period 1500-1635 as many as 912 ships left Portugal for the East. 768 reached their destination. There were 550 ships which left for Portugal but only 470 reached there.[3]

The recruitment, training and discipline of sailors were as poor as in the case of the soldiers. Most of the recruits received their training only during the course of their voyage from Lisbon to Goa. Usually about 125 trained sailors were necessary to man a vessel; but rarely was this number to be found. Besides, the status of a sailor was inferior to that of a soldier, and therefore it was more difficult to find recruits for the navy. Nevertheless, the lure of booty from enemy ships attracted many to become sailors. The Portuguese navy was the mightiest in the 16th century, though afterwards the Dutch and the English stole the limelight. The "liberty chests" constituted another attraction. Sailors and others were allowed to take with them to Portugal a certain amount of merchandise free of freight. Some space, the size of which varied in accordance with the rank of the individual men, was allotted to each sailor and official. The latter could fill the space, the "liberty chests" with goods of his choice. He could also sell the space to the highest bidder.[4]

Economic Institutions

The Portuguese had come to the East in order to secure spices; but the spice trade was under the control of the Arabs and Muslims. Two things were necessary to remove the monopoly control of the enemies.

[1] *Portuguese Seaborne Empire*, pp. 207-208.
[2] *Ibid.*, pp. 209-210.
[3] *Ibid.*, p. 219.
[4] *Ibid* p. 216.

First, the backbone of their power, i.e. navy, had to be destroyed. Second, the important strategic places along the shores of the eastern waters had to be secured and fortified. The Portuguese fulfilled these objectives within two decades of their arrival at Malabar in 1498. Francisco de Almeida achieved a thumping victory against the combined fleets of Egypt and Gujarat in 1509 off Diu. Afonso de Albuquerque conquered Goa, Malacca and Ormuz, though his attempt to take Aden failed. With Sofala and Mozâmbique also coming under them, the Portuguese control over the eastern waters was virtually complete. They regarded themselves lords of the seas and decided not to allow any one in the East from kings down to ordinary merchants to navigate the seas without their permission. They evolved the system of *cartazes*[1] to enforce this decision.

The *Cartaz* was a sailing permit issued by the Portuguese either at Goa or at any other fort or factory of theirs, depending upon the destination of the native vessel for which the *cartaz* was sought. A vessel sailing across the Arabian Sea or to the Bay of Bengal had to secure a *cartaz* at Goa. A *cartaz* issued at a factory or a fort was enough for a ship sailing along the west coast of India. A few was charged for the *cartaz*. Usually a *cartaz* was valid for one year. It specified the articles which the vessel was not to carry and the ports which she was not to enter. She was liable to confiscation if any of the provisions of the *cartaz* was violated of course, the Portuguese could not impose the system of *cartazes* on all Indian princes even in the 16th century and thereafter. As Barros puts it, the European rivals were Christians and therefore their right to navigate the seas freely had to be recognised[2] During the 17th and 18th centuries the Portuguese had very little control over the sea and their system of *cartazes* could hardly be imposed on the Indian princes.

Trade in certain commodities like spices was a royal monopoly. However, private trade was allowed to the crown officials from the viceroy down to writers and soldiers. Private trade was an incentive to them as their salary was very low. Another incentive was the *caixa de liberdade* or liberty chest referred to earlier. Both private trade and the liberty chest affected royal trade and treasury adversely. Efforts were made to abolish both of them, but in vain. Modest increases in salary in lieu of private trade or *caixa de liberdade* could hardly attract men to take up appointments in the East. It was argued in favour of the *caixa* that it led to better defence of the vessel when attacked by enemies because each had a stake in the *caixa*.[3]

[1] Shastry B.S., "*The System of Cartazes*", *Journal of Indian History*, Vol. LI part II, Serial No. 152, August, 1973, Trivandrum, pp. 297-300.
[2] Whiteway, *op. cit.*, p. 21.
[3] *Portuguese Seaborne Empire*, p. 216.

The factories were the main economic institutions of Portuguese India. They carried on trade and commerce, collected tariffs and other dues on behalf of the king. In 1599, a central body known as the Board and Tribunal of Accounts was created. The name was changed to Treasury Council in 1615. Later, in 1769, it was renamed the Board of Public Revenue. The governor was the president of the Board. Among its members was the Inspector General of Accounts or Treasurer-General.[1]

Customs houses were established at various points in Diu, Daman, Bardez, Salcete and Goa (Tiswadi), as well as in other Portuguese possessions. The rates of customs duty varied according to the articles of trade. At Old Goa, under an order of 1567, it was 6 per cent *ad valorem* on all articles, except pearls, gems, gold, silver and horses Forty *ashrafis* were charged for every horse. For precious stones, etc. the levy was 4 per cent at the port and 1·5 per cent more on entry into Goa. In 1570 one per cent more was levied above 6 per cent *ad valorem* and 2 per cent more in 1617. The levies above 6 per cent went to the municipality of Goa. In 1725, the levy was reduced to 5 per cent and a third of this went to the municipality.[2]

Land revenues were collected by the Portuguese in Goa through the instrumentality of the village communities. The crown lands, such as those confiscated from Muslims on the conquest of Goa, were distributed among the *casados*. There was no tax on such lands, except the tithe due to the church. The extent of land revenue varied from time to time.[3]

The discussion on the social, economic and administrative activities of the Portuguese will not be complete without considering the liberal policies of Marques de Pombal who guided the destinies of Portugal and her colonies from 1750 to 1778. One of the worst features of Portuguese administration in Goa was racial discrimination in matters of employment to civil and military departments. Hindus, of course, had little chance of entering into good positions. Even native Christians were discriminated against. Pombal did his best by ordering the viceroys to recruit men on the basis of merit, and not on grounds of colour or caste. He was in favour of granting religious freedom to non-Christians. He abolished the Goa Inquisition which oppressed the Christian community here. He had full faith in the native clergy and Christians. His liberal policies however, did not prove a total or lasting success. The Goa Inquisition was reinstated after his fall from power, but with much less power and authority. Racial discrimination continued and proved to be the most important factor that led to the conspiracy of the Pintos in 1787.

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[1] Gracias., *op. cit.* pp, 103-104.
[2] Gune, *op. cit.*, p. 21.
[3] *Ibid.*, pp. 20-21.

The leaders of the conspiracy of 1787 were inspired by the French political thought then current. The principal leaders were some Goan clergy who had been to France and had returned with the French 'Enlightment'. They were also moved by a desire to put an end to the colour bar being practiced by the Portuguese authorities. In 1761 and 1774 Pombal had issued orders that employment opportunities should be open to all, that merits alone, not colour, should be the criterion of employment, and that native Christians should in fact be given preference *vis-a-vis* white men or Portuguese nationals. In spite of these, non-white Christians of Goa were not admitted to high civil and military offices and to the upeer hierarchy of the Church. Therefore several non-white Christian civilians, militiamen and clergy participated in the movement. But the government obtained intelligence of the movement when it was still in a discussion stage. The participating civilians and military personnel were put to death barbarously. The clergymen were imprisoned and many of them were allowed to die there.[1]

Portuguese-Maratha relations

The Portuguese became concerned with the activities of Shivaji, founder of the Maratha power, when he extended his territories to the Konkan and began to establish a navy. By 1659 he had a fleet of twenty warships and some merchantmen. The vessels were anchored at different ports, namely, Bhivandi, Kalyan and Panvel. A large number of Portuguese nationals, some of whom were fortune seekers and some deserters, had entered Shivaji's service and worked for the establishment of his navy. Rui Leitao Viegas was appointed to command the fleet. He was asked to obtain permission from the Portuguese authorities to take the ships out to the sea. The latter, however, decided not only to prevent the ships from sailing out but also to scuttle Shivaji's efforts to possess a navy. There were two reasons for their decision. First, they wanted to help their friend, the Siddi of Danda-Rajapur, with whom Shivaji was at war. The latter was actually planning to send the fleet against the Siddi. The second reason was that the Portuguese feared that one day Shivaji might use his fleet against themselves. Accordingly, they refused to permit his ships to sail out of his ports. They also succeeded in persuading Viegas and more than three hundred other fellow compatriots, who were assisting Shivaji in his navy to desert all at once.[2] This was a severe blow to the Maratha king, but he was not a man who could be stopped from his cherished goal. And the Portuguese could not prevent his naval progress to any appreciable extent.

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[1] *Portuguese seaborne Empire*, pp. 199-200. For details, J.H. da Cunha Rivara, *A Conjuracao de 1787 em Goa* (Nova Goa, 1875).

[2] *Assentos*, IV, 5 Note (3).

A word about the general policy of the Portuguese towards Shivaji: They did not dare to go too far against him. Their navy was certainly superior to that of Shivaji and they could defeat him any time on the sea. But they were weaker than him on land and he could easily take their mainland territories like Bardez and Salcete. Knowing this very well, they were cautious in their dealings with him. Their relations with him varied from friendship to neutrality or hostility depending upon circumstances and powers involved. There was hardly an occasion when Shivaji was supported by them against the Adil Shah of Bijapur. They did not want Shivaji to become stronger and disturb the balance of power in the Deccan. Therefore they either assisted the Adil Shah against him or remained neutral. Towards the end of 1664, Shivaji captured Kudal, Pernem and Bicholim from the Adil Shah. The Dessais of these regions were given shelter in Goa from where they often trespassed into Shivajis lands. The Portuguese thus protected his foes. Their pretext was that there was friendship between them and the Adil Shah whose vassals the Dessais were.[1]

Then, after the treaty with Jai Singh, the Mughal general, in June 1665, Shivaji busied himself against the Adil Shah. He defeated Khawas Khan, a general of the latter, on the Konkan coast. The Portuguese thought it wiser to keep neutral, though both the belligerents had sought their support.[2]

In 1666, Shivaji besieged Ponda which was in the Adil Shah's possession then. The Portuguese secretly aided the Adil Shahi garrison with ammunition and thus contributed to its successful resistance to Shivaji.[3]

In 1675, Shivaji besieged Ponda again. The viceroy of Goa professed neutrality, but sent succour to Ponda secretly. The viceroy genuinely feared that if the fort fell into Shivaji's hands, Goa would be the next target of his attack. On one occasion the viceroy dispatched ten small vessels with provisions and soldiers to Ponda. However, all these fell into Shivaji's hands. The Maratha ambassador in Goa protested, but the viceroy denied responsibility for the dispatch of the vessels. Ultimately Ponda was taken by Shivaji towards the middle of May.[4]

The Portuguese usually sympathised with Shivaji against Aurangzeb, the mightiest ruler of the day in India. They were prepared to give Shivaji shelter in their territories in 1664, if necessary,

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[1] Pissurlencar P.S.S., *Portugeja-Marathe Sambandh* in Marathi, p. 52.
[2] Pissurlencar P.S.S., *Portugueses e Marathas*, pt. I, p. 14.
[3] *Portugeja-Marathe Sambandh*, p. 55., *Assentos*, IV, pp. 152-153.
[4] Pissurlencar P.S.S., *Shivaji no Concao*, in *Boletim do Instituto Vasco da Gama*, (Nova Goa, 1939), No. 32, pp. 133-134.

during his return from the surprise sack of Surat belonging to the Mughal emperor. Confronted by the mighty Mughal force under the redoubtable command of Jai Singh in 1665, Shivaji seems to have inquired from the Portuguese whether they would give him shelter in their territory, probably at Chaul, should such a necessity arise. They were ready and suggested that Goa would be safer than Chaul for him to retreat. What is more, they decided to aid him secretly by supplying him with ammunition and food-grains.[1]

There were a couple of occasions when Shivaji and the Portuguese came into a headlong collision. In 1664, the Dessais of Kudal, Pernem and Bicholim, on being defeated by him, took shelter in Bardez in Goa. The Dessais used to enter their former possessions and harass his officials there. He protested several times that the Portuguese sheltered the Dessais and allowed them to trespass into his territory now and then. The protests had no effect on either the Portuguese or the Dessais. Finally in 1667, Shivaji decided to attack Bardez. He looted and burnt some villages for three days in succession from 20 to 22nd November. In all, about 1,600 men, women and children were taken prisoners and some were killed. Among the killed were three or four Catholic priests and some Christians. It seems that the viceroy had received intelligence of the attack four days before it actually took place. He warned the Dessais and took some measures to strengthen the defence. Shivaji, however, had no intention of occupying any Portuguese territory and withdrew. Yet the viceroy claimed that Shivaji retreated because he feared the small troop of 84 men led by the viceroy personally on the 22nd of the month.[2]

Negotiations were opened to settle the differences and a treaty was finally concluded on 5th December. The treaty provided for the mutual restoration of captives; expulsion of the Dessais from Goa if they trespassed into Shivaji's lands; commercial relations subject to traditional payment of taxes; recourse to negotiations before taking to arms in case of a dispute; and a sale of arms to Shivaji if the terms were acceptable to the Portuguese.[3]

There seems to prevail a controversy regarding the causes of Shivaji's attack on Bardez. Some historians are of the opinion that he disapproved of the policy of religious persecution prevailing in Goa and wished to force the Portuguese authorities to give up that policy. In support of their view these historians quote a letter dated 30th November, 1667, written by an Englishman from Goa. The letter

[1] Pissurlencar P.S.S., *The attitude of the Portuguese towards Shivaji during campaigns of Shaista Khan and Jai Singh*, *Proceedings of the Indian Historical Records Commission* (Calcutta, 1927), Vol. IX.

[2] *Portugueses e Maratas*, pt. I, pp. 17-18; *Shivaji no Concao*, pp. 121-22.

[3] *Ibid.*, pt. I, pp. 18-19, 21-23.

states that Shivaji resented religious persecution in Goa, and therefore invaded Bardez; that he killed four priests who refused to become Hindus; that this frightened the viceroy so much that he revoked "his fierce and severe edict".[1] The latter, however, does not say what the edict was. Nor does the author of the letter seem to be a reliable observer. No other document, official or unofficial, refers to any religious motive behind Shivaji's invasion of Bardez. The treaty between him and the Portuguese, which was concluded soon after the invasion, does not refer to it or any other religious factor. And the treaty is stated to have been concluded only after all the requirements of Shivaji were met with by the Portuguese. Further, there is no evidence to show that the Hindus of Goa had complained to Shivaji of persecution. If some Catholic priests and Christians were killed, it was only in the course of looting and action in the battle.[2]

The primary cause of his invasion of Bardez was the anti-Shivaji activities of the Dessais of Kudal, Pernem and Bicholim. The Dessais had taken shelter in Bardez from where they continued their hostile activities against him. In the first half of 1666, encouraged by the Portuguese, they assisted the Adil Shahi garrison at Ponda against Shivaji.[3] In the beginning of 1667, Keshav Naik of Pernem entered that region and brought its Maratha *havaldar* a prisoner to Bardez.[4] Later in the year, Naroba Sawant, a nephew of Lakham Sawant, went with some Portuguese men to Vengurla and molested the Dutch who had a factory there and enjoyed Shivaji's patronage.[5] As already mentioned, Shivaji's protests did not receive any attention at the hands of the Portuguese and the result was his invasion of Bardez. By the treaty that was concluded after the invasion, the Portuguese bound themselves to restrain the Dessais from hostility towards Shivaji as long as they remained in Bardez. The Portuguese agreed to expel the Dessais if they violated peace with him Later, the Dessais did violate peace and the Portuguese did expel them from Goa.[6]

There was another cause for the invasion. It was Shivaji's economic need. By looting Bardez, as he had looted Surat, he obtained some wealth.

A third possible cause was the encouragement given to him by the Dutch to invade the Portuguese territory, as alleged by the Portuguese themselves.[7] The Dutch might have done so as a

[1] *Shivaji no Concao*, pp. 124-125.
[2] *Portugeja-Marathe Sambandh*, pp. 61-62; *Shivaji no Concao*, pp. 123-127 131.
[3] *Shivaji no Concao*, p. 118.
[4] *Ibid.*, p. 120.
[5] *Ibid.*, p. 122.
[6] *Ibid* p. 131; *Portugueses e Maratas*, I, pp. 22-25.
[7] *Ibid* pp. 122-123.

retaliatory measure against the Portuguese who had helped Naroba Sawant to molest their factory at Vengurla. It is also said that the Portuguese had requested Shivaji, but in vain, to expel the Dutch from Vengurla, offering him 15,000 *pagodas* for the service.[1] The Dutch might have come to know of this. They helped Shivaji with ammunition on the occasion of his invasion of Bardez.[2]

If Shivaji's attack on Bardez in 1667 marked his first confrontation with the Portuguese he planned for another confrontation in the following year by scheming to take Goa. In October 1668, 400 to 500 of his men entered Goa secretly. He planned to double their number soon. He was certain of taking Goa by a surprise attack with the sudden rise of three thousand men one night to begin with. The strategem however, was uncovered by the Portuguese before it materialised. Though he had amassed 8000 to 10,000 men intending to march into Goa, he desisted from doing so, as he found the Portuguese well prepared to meet him.[3]

Shivaji became increasingly annoyed with the Portuguese after his coronation in 1674. The main irritant was the delaying tactics adopted by them on the question of the payment of the *chauth* due to him from Daman. In the 16th century the king of Ramnagar had ceded the Portuguese some territory at Daman on the condition that they paid him the *chauth*. He had the responsibility of protecting the territory for thieves.[4] In June, 1672, Shivaji defeated the king of Ramnagar. He then demanded that the *chauth* that was being paid to the defeated monarch be paid henceforth to the victor. The Portuguese delayed payment under one pretext or another. And they secretly aided the king of Ramnagar in 1677 with Rs. 4,000 or 5,000 out of the amount of the *chauth* that had accumulated with them from 1673 to 1676 so that he could continue his struggle against Shivaji.[5] The battle of 1677 brought victory once again to Shivaji against Ramnagar. The former now pressed for the payment of the *chauth*, but in vain. He lost his patience and prepared to attack Goa. The Portuguese too readied themselves to meet the challenge. However, no actual war broke out owing to the untimely death of Shivaji in 1680.

Hostilities between the Marathas and the Portuguese ceased on the death of Shivaji and peace seemed to prevail for about two years

[1] Balkrishna, *Shivaji the Great* (Bombay, 1932), I, Part II, pp. 96-97; Bendre V.S., *Shri Chhatrapati Shivaji Yanche Vichitsak Charitra* (Marathi), Bombay, 1972, vol. I, p. 289.

[2] *Shivaji no Concao*, p. 122.

[3] *Ibid.*, p. 132.

[4] Pissurlencar P.S.S., *A Origem do Tributo Chouto*, *Boletim do Instituto Vasco da Gama* (Nova Goa, 1939), No. 42, p. 66.

[5] *Ibid.*, pp. 69-70.

Shivaji's successor, Sambhaji, was busy strengthening his own position against his rival Rajaram. He sent an envoy to Goa to win the Portuguese away from the rival. The Portuguese welcomed peace negotiations. Yet as the negotiations were in progress, some Maratha soldiers entered Siolim in Bardez and took away three men of Bicholim who had taken shelter in the Portuguese village. Besides, the Subedar of Bicholim arrested some merchants of Goa, dealing in diamonds. The Viceroy of Goa suspended all trade and commerce with the Marathas. However, peace negotiations were not broken off. What is more, the Subedar of Bicholim was removed on receiving complaints against him from the Portuguese.

Nevertheless, peace negotiations did not result in any treaty. On the contrary by the beginning of 1682, Sambhaji planned to occupy Anjediva. The Portuguese forestalled it by promptly fortifying the islands Sambhaji objected, but the Portuguese pointed out that Anjediva was always within their own jurisdiction since long.

In August 1682, the Portuguese authorities learnt that the Mughals were preparing to attack Sambhaji. The Viceroy of Goa instructed the Captains of Daman, Bassein and Chaul that the Mughal forces might be allowed passage through the Portuguese territories and that the Mughal forces should not be hampered in any way.[1] Sambhaji retaliated by looting and burning their village in the Province of the north, capturing their vessels and arresting their priests. The Portuguese reacted by capturing his vessels and arresting his envoy in Goa.[2]

Sambhaji and Portuguese quarrelled on other issues also. He defeated Narayana Deva Rama, king of the mountainous Assarceta and territories of Ramnagar, and captured large areas. Sambhaji then demanded the *chauth* from Daman. The Portuguese refused on the ground that he was not yet master of all the territories of the Rama.[3]

In the meantime a Mughal envoy arrived at Goa in January 1683. He proposed that the Portuguese should wage a war against Sambhaji, supply provisions to the Mughals on a commercial basis and allow Mughal vessels unmolested voyages between Surat and Bombay. The Portuguese acceded all the conditions except the burden of a war with Sambhaji. The latter was told of the Mughal proposals and was urged by the Viceroy of Goa to conclude a regular treaty with the Portuguese.[4] At the same time, the Viceroy wrote to Aurangzeb as well, pointing out how the Portuguese had allowed free passage to Mughal forces even before the emperor's letter was delivered at Goa.

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[1] *Portugeja-Marathe Sambandh*, p. 90.
[2] *Ibid.*, p. 92.
[3] *Portugueses e Maratas*, pt. II, pp. 57-58.
[4] *Portugeja-Marathe Sambandh*, pp. 90-91.

On the whole, the Portuguese preferred to earn the goodwill of the Mughals as they regarded Sambhaji a more dangerous enemy.[1]

Sambhaji, on his part, besieged Chaul by the middle of 1683. The Portuguese decided to distract him by attacking Ponda. In the beginning of November, the viceroy himself marched with a large force and laid siege to Ponda. The Maratha garrison, there was a small one, but it defended the fort valiantly. Learning of the trouble at Ponda, Sambhaji came down personally and reinforced the garrison with 600 men. The viceroy was forced to withdraw. Disorder ensued in the retreat. There was much loss of men and material. The viceroy himself was in danger of losing his life. The Portuguese were not only defeated at Ponda but their object of freeing Chaul from the Maratha attack also was not fulfilled as Sambhaji did not withdraw his men from Chaul.[2]

Sambhaji demolished the existing fort of Ponda soon after the Portuguese were driven away and built a new one. The new fort was named Mardangad.[3]

From Ponda, Sambhaji turned his attention to the Portuguese territories of Goa itself. He occupied the fort of Juve on November 24. His plan was to enter Tiswadi by the Dhavji pass at low tide. The viceroy attempted to expel the Marathas from Juve on the 15th. He was beaten off with loss. But the Marathas suddenly retreated on the 26th. Sambhaji sent an envoy to the viceroy on the 28th saying that Prince Akbar, Aurangazeb's rebel son, wished peace between the Marathas and the Portuguese. The latter ignored the envoy as his credentials were regarded unsatisfactory.[4]

Sambhaji's forces entered Bardez on December 11. None of the captains of the Portuguese fortresses there came out to oppose the Marathas. It was in keeping with the instructions of the viceroy as an open battle was impossible. The Maratha soldiers robbed and burnt churches and villages, lifted the cattle and caused much damage. The fort of Tivim fell into Maratha hands after 10 days for want of potable water inside. The remaining forts also fell soon after. The fort of Chapora surrendered without a shot.

The Marathas had entered Salcete also the very day they had attacked Bardez. A huge quantity of foodgrains and cattle were carried away. The fortified and armed churches of Margao and other places were attacked and looted. The people of Assolna and Cuncolim agreed to become Maratha subjects and pay whatever

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[1] *Portugeja-Marathe Sambandh* p. 91

[2] *Ibid.*, pp. 95-100; *Portugueses e Maratas*, pt. II, pp. 33-34.

[3] *Ibid* pp. 102-103.

[4] *Ibid.*, pp. 104-105; *Portugueses e Maratas*, pt. II, pp. 43-48.

amount of revenues they used to pay to their Portuguese masters. The enemy remained in Bardez and Salcete for 26 days beginning with December 11, 1683.[1]

The Portuguese were too weak to withstand the Maratha attack. Tiswadi also could have been taken by Sambhaji easily. Realizing the hopeless position in which he found himself, the viceroy, Conde de Alvor (Francisco de Tavara), knelt before the tomb of St. Francis Xavier at Old Goa and prayed the saint to save Goa. Soon after, he received the news that the Marathas had withdrawn in order to face a huge Mughal army which had descended on the Konkan. Shah Alam, a son of Aurangzeb had arrived at Bicholim on January 15, 1684, with a Mughal army. Three days later a Mughal fleet with provision for the Mughal soldiers also anchored at the mouth of the river Mandovi. Shah Alam proceeded to loot Bicholim and pull down Sambhaji's place there. The Portuguese professed friendship with the prince and allowed the Mughal fleet to enter river Chapora.[2]

Meanwhile, Sambhaji had withdrawn from Bardez and Salcete, and peace negotiations between him and the Portuguese were resumed. A treaty was concluded some time between January 25th and February 4th, 1684. The text of the treaty is not traceable. Some of its provisions are mentioned in a letter of February 4, from the Viceroy to the General of the north. Sambhaji agreed to restore all lands, forts, vessels, arms and provisions taken from the Portuguese. The latter undertook to continue to pay the *chauth* from Daman and not to permit Mughal vessels loaded with provisions to enter any port provided the Portuguese had forts equipped with guns at such ports. Sambhaji pardoned the Dessais of Konkan who used to help the Portuguese against him. Lastly, he agreed not to construct forts along the borders of Portuguese territories.[3]

The Portuguese were apparently unwilling to adhere to the spirit of the peace treaty. They offered to fight with Sambhaji on behalf of the Mughals provided that the latter gave a sum of two million *ashrafis*. This was equivalent to the damage caused to them by Shivaji in 1683-84. But nothing seems to have come out of this offer. Nevertheless, the Viceroy allowed the Dessais of Konkan, who had taken shelter in Bardez and other places belonging to the Portuguese, to proceed to Bicholim and join the Mughal service.[4]

Sambhaji too did not observe the provisions of the treaty faithfully. He did not return all the captives, arms and vessels taken from the

[1] *Portugueses e Maratas*, pt. II, pp. 48-51.
[2] *Ibid.*, pp. 52-53, 59-60.
[3] *Ibid.*pp.53-57 *Portugeja Marathe Sambandh*, pp. 114-115.
[4] *Portugueses e Maratas*, pt. II, pp. 62-64.

Portuguese. The forts of Bardez remained with him long after the treaty. What is more, he amassed troops at Ponda with a view to attacking Tiswadi. In fact, in July and thereafter, his men kept on attacking Portuguese lands at Goa. These hostile activities went on until the tragic end of his life at the hands of Aurangazeb in 1689.[1]

It should not be supposed that the Mughal relations with the Portuguese were straightforward. Aurangzeb wrote to the Viceroy, urging the latter to continue the war against Sambhaji in return for the lands captured from the Marathas. But not only did Aurangzeb give such lands to other's but also instructed Shah Alam to take Goa by treachery.[2]

Meanwhile, the Portuguese tried to strengthen their own hands by concluding a treaty with Khem Sawant and other Dessais of the Konkan on February 8, 1685. The treaty was aimed against Sambhaji who kept up his hostile activities against the Portuguese while Aurangzeb was busy destroying Adil Shahi kingdom of Bijapur and the Kutb Shahi dynasty of Golkonda. It provided that the Portuguese would receive two-thirds of the lands and forts that might be captured from Sambhaji between Banda and Ankola, and one-third of those between Kudal and Chaul. The Portuguese were to help the other contracting parties with a fleet at their own cost in the conquest of Sambhaji's lands. None of the signatories was to sign a peace treaty with Sambhaji independently. The Portuguese were to persuade Aurangzeb to accept the services of Khem Sawant and other Dessais. The contracting parties, including the Portuguese, commenced aggression against the Marathas soon after concluding the agreement.[3]

Sambhaji was murdered brutally by the Mughals in March 1689. Rajaram was proclaimed by the Marathas as his successor. Rajaram found it insecure to remain in Maharashtra and therefore took shelter at far off Jinji. Great precaution was necessary to escape Aurangzeb's vigilance. The latter sought Portuguese aid in capturing Rajaram during his flight. The Portuguese were willing to oblige but the Maratha king apparently did not approach anywhere near their territories.[4]

The inhuman murder of Sambhaji had shocked the Marathas. Overnight they were united and determined to safeguard themselves against the powerful Mughal. Even the Dessais of Konkan, who were on his side, now joined the Maratha cause. The Mughal authorities

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[1] *Portugueses e Maratas*, pt. II, 65-67.
[2] *Ibid.*, pp. 67-68.
[3] *Portugeja-Marathe Sambandh*, pp. 126-127.
[4] *Portugueses e Maratas*, pt. III, pp. 1-2.

requested hte Viceroy of Goa to arrest the families of such rebel Dessais who had left their families behind in Portuguese territories like Bardez. The Viceroy did not oblige.[1]

The Portuguese were now of the view that Rajaram was preferable to Aurangzeb. However, they did not defy the latter openly. Rather, they kept neutral. Rajaram wrote to them desiring friendship. He was reciprocated. Some families of his officers were sheltered in Portuguese territories. At the same time, the Mughal general of Kudal was also allowed shelter at Goa for his family and treasures.[2]

Nevertheless, relations between the Portuguese and Rajaram were not peaceful always. In November 1694, a Maratha force entered Bardez, took some cattle away, and collected three rupees from each resident. The Viceroy threatened war. But peace was restored by the middle of the next year. Thereafter, peace prevailed between them until Rajaram's death in 1700.[3]

In October 1702, the Marathas invaded Ponda which was under the Mughals who had conquered it from Sambhaji in January 1689. The Mughal garrison of Mardangad defended the fort for some time. It received help from the King of Sonda who supplied some soldiers and from the Portuguese who provided munitions. By January 1703, however, there was an acute shortage of provisions inside the fort. The Portuguese felt that it might fall to the enemy any time. At this stage, the Mughal *faujdar* sought help from Khem Sawant Bhonsle of Kudal. The Portuguese also urged the Bhonsle to extend succour. He sent his troops, captured the fort and retained it for himself. But the fort did not remain with him for long. The Mughals recovered it from him in June 1705.[4]

In February 1785, the Bhonsle and the Portuguese had concluded a treaty of co-operation against Sambhaji as noted earlier. The Bhonsle entered Aurangzeb's services through Portuguese mediation and began a career of conquest in 1689 when he recovered Banda and Kudal. Later, as Aurangzeb's hold on the Maratha territories was uncertain, the Bhonsle ceased to be loyal to the Mughals. In 1698 he captured Bicholim, Pernem and Sanquelim from the Mughal officers. He besieged Ponda too; but it was saved for the Mughals with the Portuguese help. The latter did not want him to become too powerful. Besides, there was no apparent move by him to share the conquered territories with them as required under the treaty of 1685. Nevertheless, the Portuguese did not break off friendly relations

[1] *Portugueses e Maratas*, pt. III, pp. 3-5.
[2] *Ibid.*, p. 5.
[3] *Ibid* pp. 9-10.
[4] *Portugeja-Marathe Sambandh*, pp. 134-135.

with him until 1705. That year they invaded his territories and destroyed his forts of Amona and Volvoi. In December 1706, the Bicholim fort was taken and pulled down.[1]

In the meantime, the Portuguese negotiated with the Mughals for the transfer of the Ponda *mahal* to the king of Sonda. The latter was a Mughal feudatory since 1685 and Aurangzeb had given him the territories from Canacona to Ankola. The Portuguese regarded the Sondekar a safe neighbour. In their opinion he was more a merchant than a warrior. Aurangzeb agreed to give the Ponda *mahal* to him for an annual tribute of Rs. 80,000. The Sondekar took over in 1706. The Mughal *fauzdar* of Ponda did not like the transfer. He tried, on the death of Aurangzeb in 1707, to take Ponda with the help of the Bhonsle of Kudal. The latter, in fact succeeded in capturing Murdangad. But the Portuguese recovered it from him and gave it to Sondekar in May 1707. What is more, they took Corjuem and Panelim belonging to the Bhonsle in the same year.[2]

In 1708 Shahu Chhatrapati sent an envoy to Goa, expressing friendship and informing the Viceroy that the Konkan had been assigned to the Chhatrapati as a *Jagir*. The latter intended to send an army to recover Banda, Pernem, Bicholim, Sanquelim and Mancri from Khem Sawant Bhonsle who was entitled only to Kudal. So also he intended to confine Sondekar to Sonda. The Portuguese were asked to hand over the islands of Corjuem and Panelim taken by them from the Bhonsle. Of course, the Portuguese refused to give up the two islands : but they reciprocated friendship towards Shahu and agreed to supply munitions and provisions to the army that might come down to recover territories from the Bhonsle and the Sondekar.[3]

In the meantime, Khem Sawant Bhonsle expressed his loyality to Tarabai who contested Shahu's claim to the Maratha throne. The Bhonsle obtained from her Kudal, Banda, Bicholim, Naneri and Sanquelim as a *vatan*. At the same time the king of Sonda expressed his loyalty to Shahu and agreed to pay him an annual tribute of Rs. 25,000 for Ponda Panchamahal.[4] It however, seems that the Sondekar continued to pay Rs. 80,000 to the Mughals on account of Ponda, as a Portuguese document of 1720 indicates. Early in 1716, the Mughals wished to transfer Ponda to the Portuguese, but the latter's policy then was not to expand their territorial possessions. Accordingly the Viceroy replied that Ponda be continued under Sondekar.[5]

[1] *Portugeja-Marathe Sambandh*, pp. 125-126, 128, 129, 133, 135.
[2] *Ibid.*, pp. 124, 135, 136.
[3] *Ibid.*, pp. 136-137; *Assentos*, V, pp. 236-241.
[4] *Ibid.*, p. 137.
[5] *Ibid.*, p. 138.

Relations between the Portuguese and the Marathas could hardly be regarded cordial after 1707. In 1717, Salcete was looted by a Maratha force which carried away a booty worth more than 5,00,000 ashrafis. In 1728, two villages belonging to the Portuguese at Daman were looted. As a measure of retaliation, the Portuguese administrator of Bassein attacked Kalyan, causing much damage.[1] These hostilities culminated in the Maratha invasion of Portuguese territories between Goa and Daman in 1737-1739.

The Maratha invasion commenced on April 6, 1727 at Bassein. The Viceroy dispatched warships, munitions, men and money to the defence of Bassein. Provisions were rushed from Daman. As weeks and months rolled by, the Portuguese became weaker and weaker. They did not receive adequate reinforcements from Portugal. They could not raise sufficient money and men locally in Goa or elsewhere. It was indeed a marvel that the Portuguese defended themselves so long—until the war came to an end with the fall of Bassein in May 1739.

The Marathas attacked Daman in November 1738 to prevent it from supplying provisions to Bassein. A number of villages were taken and the crops there were burnt.[2] Another detachment of the Maratha army invaded Salcete in Goa on January 23, 1739. The Portuguese were too weak to defend themselves there. Margao fell on the 26th. Soon, the whole of Salcete, except the forts of Rachol and Mormugao, came under the Marathas. The latter then proceeded to take Sanguem, Ponda and Supem, all of which belonged to Sondekar. The people of Ponda helped the Marathas. The *gaonkars* of Marcaim and the *Naik* of Durbhat were of great assistance to the invading Marathas. The commandant of the fort of Mardangad opened the gates of the fort on the approach of the Maratha troops.[3]

Meanwhile, Ramachandra Sawant and Jayaram Sawant, rulers of Kudal, encouraged by the Marathas, had invaded Bardez in March 1739. The whole region, except the forts of Aguada and Reis Magos came under the Bhonsles very quickly.[4]

Hedged in from all sides, the Portuguese opened negotiations with the Peshwa. They were ready to cede Bassein, provided Bardez and Salcete of Goa were returned. Negotiations were initiated by them in March. The Maratha response was harsh to begin with. They demanded 180 *khandis* of gold, saying that the treaty between the Portuguese and Sambhaji required a tribute of 3 *khandis* a year and

[1] *Portugeja-Marathe Sambandh*, pp. 146-147.
[2] *Ibid.*,
[3] *Ibid.*, p. 179; *Portugueses* p. 159. *Maratas*, IV, pp. 70-84.
[4] *Ibid.*, p. 180.

that it had not been paid for 60 years. The Marathas threatened to take Tiswadi also if this condition was not fulfilled. They also demanded that the reign of the Inquisition should end and the Hindus should be allowed to live according to their own *dharma*. The Portuguese pointed out that there was no agreement with Sambhaji regarding the gold tribute and that religious issues could be settled by nobody but the King of Portugal.[1] The Portuguese remained firm on these points and the Marathas then agreed to moderate terms. A teraty was concluded on May 2, with the following terms.[2] (1) The Portuguese should pay a war indemnity of 7 lakh rupees. Out of this 2 lakhs were to be paid promptly, upon which the Marathas would withdraw from Bardez and Salcete. Three lakhs were to be paid eight days later and the last payment of 2 lakhs was to be followed by the release of Portuguese hostages. (2) The Marathas should be paid 40 per cent of the revenues of Bardez and Salcete every year. (3) The Portuguese should return Corjuem and Panelim to the Bhonsle. The latter was no more to pay the annual tribute of 1,000 *ashrafis* to the Portuguese. (4) The Marathas should return the prisoners taken at Bardez, Salcete and the province of the North. (5) The Portuguese merchants should be allowed trade facilities at Ponda belonging to the Peshwa subject only to the payment of traditional duties. (6) The contracting parties should not intrude into each other's territories.

The Portuguese paid the first instalment of 2 lakh rupees; but the Marathas did not withdraw their troops completely. They withdrew from all parts of Salcete, excepting Cuncolim and Assolna. The Bhonsle did not recognize the treaty and refused to withdraw from Bardez. The Portuguese realised soon that the Marathas would not withdraw fully unless some territorial compensation was given elsewhere. A fresh treaty was concluded through the mediation of the English at Bombay on September 9, 1740.[3] The Portuguese ceded Chaul and Morro (Korle) and the Marathas withdrew from Cuncolim and Assolna. At Daman, the *pargana* of Nehor (Naer) was given to the Portuguese. What is more, the Marathas gave up their demand for the 40 per cent of the revenues from Bardez and Salcete. Besides, the demand for 5 lakhs of rupees, which had not been paid by the Portuguese out of the 7 lakhs stipulated in the treaty of May 1739, as the Marathas had not withdrawn fully, was given up.

In the meantime, a separate treaty[4] had been concluded on May 6, 1739, concerning the province of the north Bassein and all its

[1] *Portugeja-Marathe Sambandh*, pp. 188, 191, 192.
[2] *Ibid.*, pp. 192-194; *Portugueses e Maratas*, pt. IV, pp. 124-126.
[3] *Ibid.*, pp. 202-204, *Portugueses e Maratas*, pt. IV, pp. 48-50.
[4] *Ibid.*, pp. 126-127.

adjacent territories became part of the Maratha empire. Those who wanted to leave Bassein were permited to go with their belongings. The fort of Daman was left to the Portuguese. It's adjacent territories however, were retained by the Marathas. Only the *pargana* of Nehor was later returned to the Portuguese by the treaty of 1740 as noted above.

The Bhonsle was still in Bardez. The Viceroy, Conde de Sandomil, decided tc expel him on receiving reinforcements from Portugal. He also expected the return of the soldiers from the province of the north after the cessation of warfare there. In September 1739, some reinforcements in fact reached Goa. But it was hardly adequate. Nevertheless in October, the Viceroy sent his troops to Tivim, Colvale, Chapora, etc. The Bhonsle suffered some reverses in the initial stages ; but recovered soon after and drove the Portuguese back with considerable loss. He was thus master of Bardez once again excepting Aguada and Reis Magos.[1]

Nevertheless the belligerents entered into a treaty on February 28, 1740, through the good offices of Naro Ram Mantri, a confidant of Peshwa Baji Rao. The Bhonsle gave up Bardez as well as Panelim. The Portuguese allowed him to have Corjuem and Pirna. They took over Bardez from him on March 13.[2]

The peace did not last more than a year. Jayaram Bhonsle decided to take not only Bardez but also Salcete and Goa. His plan was to take the Aguada fort first. The Portuguese received intelligence of the Bhonsle's preparations against Aguada and strengthened its defences. Bhonsle failed to take it when he commenced waging a war against the Portuguese on February 21, 1741. The Portuguese defended the fort of Reis Magos also successfully. But the rest of Bardez came under the Bhonsle on the same day. His attempt to enter Goa through Cumbarjua and other passes, however, was foiled because of the chance arrival of an English fleet at Aguada. The Portuguese fleet itself was away from Goa at the time. The Bhonsle had chosen his time well. But the English helped the Portuguese defence of Tiswadi.[3]

The Portuguese sought help from the Marathas in accordance with a provision of the treaty of September 1740. The treaty had laid down that the Bhonsle and the Portuguese should observe the treaty between them concluded in February 1740 and that if either party violated it, the Marathas would aid the other. On receiving Portuguese request, however, the Marathas made excessive demands in return for

1 *Portugueses e Maratas*, pt. V, pp. 9-14.

2 *Portugeja Marathe Sambandh*, p. 201.

3 *Ibid.*, pp. 207-208; *Portugueses e Maratas*, pt. V, pp. 64-65.

the succour. Ultimately no help was given against the Bhonsle. However, in May 1741, a new Viceroy Marques de Lourical, arrived at Goa with six warships, 912 soldiers, 16 guns of the latest type and a good quantity of munitions. Lourical launched upon an attack on the Bhonsle on June 13 at various points at Bardez. Within 24 hours the Bhonsle's forces were expelled from every corner of Bardez. The Bhonsle sought Maratha help. But the viceroy pointed out to the Marathas that the latter should have actually helped the Portuguese in accordance with the treaty of September 1740. Nevertheless, the belligerents concluded a new treaty on September 11, 1741. The Bhonsle had to return Corjuem, Panelim and Pirna to the Portuguese and resume paying the annual tribute of 1,000 *ashrafis* to them. Besides, he had to pay a sum of 15,000 *ashrafis* for damages caused to the churches and forts in Bardez during his occupation.[1]

Ponda was under the King of Sonda since 1706, first as a feudatory of Aurangzeb, and then of Shahu Chhatrapati. In 1740 or thereabout. Annaji Prabhu, a Maratha general in the Konkan, took Ponda from the hands of Kalappayya, a general of the King of Sonda. It was contrary to the wishes of Naropant, predecessor of Annaji. The latter took over Sanguem and Quepem as well. The Peshwa was the overlord of the lands. In 1742, the Chhatrapati of Kolhapur decided to take these territories. His general, Govindapanta Thakur, who had just left the services of Peshwa Balaji Bajirao came down to Sanguem on May 12, with 3,000 horses, 3,000 foot and a few elephants. Annaji could not defend the territories as his forces were outnumbered. He surrendered the forts of both Sanguem and Ponda. Victorious Govinda panta sent words to Goa that the Viceroy should send an envoy for negotiations. The Viceroy did not respond. Govindapanta then entered Salcete on May 16 and encamped there for 14 days. He demanded 40,000 *ashrafis* (Rs. 20,000) as arrears of tribute since the days of Viceroy Conde de Sandomil. The Portuguese struck back on June 8. The fort of Sanguem fell to them after three hours of battle. The crestfallen Govindapanta retreated above the ghats. Kalappayya, the Sonda general, arrived at Sanguem on June 9, with 1,000 men. The Portuguese sent him to the attack of Ponda. Later on the 11th, the Portuguese themselves proceeded to invade Ponda. Annaji Prabhu was still there, defending the fort. But his position was hopeless. His soldiers numbered hardly one hundred. There was inadequate supply of munitions in Mardangad. He therefore surrendered to the Portuguese on the very day, June 11. He ordered the garrison of Supem also to give up. Ponda Panchamahal (including Sanguem) was handed over to Kalappayya on June 12.[2]

[1] *Portugueses e Maratas*, pt. V, pp. 70-73, 75-77; *Portugeja-Marathe Sambandh*, pp. 208-210.

[2] *Ibid., pp. 212-214; Portugueses e Maratas pt. pp. 80-82; pt. V, pp. IV, 12.*

In April 1746, the Portuguese decided to attack the Bhonsle's territories. The king of Sonda helped them against the Bhonsle. Viceroy Marquis de Castelo Novo (later Marques de Alorna) captured the fort of Alorna on May 5. From there he proceeded to Bicholim. The Bhonsle damaged the fort, burnt the surrounding areas and fled. The Viceroy occupied it unopposed. In the meantime, the Dessais of Sanquelim, Querim and Manerim opened friendly negotiations with the Portuguese. The Ranes of Sanquelim had animosity towards the Bhonsle because the latter demanded Rs. 40,000 from the former, and because there was a caste feud between the two. The Viceroy sent troops to Sanquelim. There was a show of fight between the Rane and the Portuguese. The latter took care that no damage was caused to the fort or the town of Sanquelim. In October, Shatroji Rane of Sanquelim, Gaus of Manerim, Raghunath Prabhu of Bicholim and Kushtuba Dessai of Advoi—all feudatories of the Bhonsle—transferred their loyalty to the Portuguese. Shatroji went to the extent of capturing the Avade, Morle and Satare forts from the Bhonsle and handing them over to the Portuguese. Hard pressed, the Bhonsle sent an envoy to Goa for peace negotiations in November. But the Portuguese pressed on with hostilities, took Tiracol on November 23 and Reddi on December 20. The Bhonsle sought Balaji Bajirao's help. The Peshwa was not in a position to attack the Portuguese then. He, however, sent monetary help and attempted to mediate to bring about a peace treaty between the belligerents. Nothing availed.[1]

During the viceroyalty of Conde de Alva (1754-56) Reddi (Raini) and Neutim were returned to the Bhonsle. But it did not bring about a permanent peace. The Bhonsle, taking advantage of the confusion that followed the defeat of the Portuguese at Ponda at the hands of the Marathas in 1756, attacked the Portuguese at Pernem, Sanquelim and Maneri. He urged the Dessais of these areas, who had accepted Portuguese sovereignty, to rebel. He besieged the forts of Bicholim and Tiraco, and aded Siolim and Zuvem (Sao Estevao). He even planned to take Mapusa in Bardez. The Portuguese, however, stood their ground. The warfare continued until 1759. And then Peshva Balaji Bajirao mediated for a treaty which was concluded between the belligerents on July 26, 1759. Pernem, Bicholim and Sanquelim were returned to the Bhonsle. The latter was not satisfied with it. He wrote directly to the King of Portugal on January 22, 1760, urging that all lands taken from him be returned. The King's policy then was not

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1 *Portugueja-Marathe Sambandh*, pp. 218-227.

to expand territorial possessions. Accordingly, he wrote to the Viceroy to return the Bhonsle's lands. As a result, a fresh treaty was concluded on December 24, 1761.[1]

Meanwhile, the Portuguese were at war with the King of Sonda also. Among the causes of this hostility were the Sondekar's permission to the English to establish a factory at Karwar, his failure to give religious freedom to Christians in his lands and his attack on some Portuguese vessels. In May 1752, the Portuguese entered Ponda and Zambaulim, looted and burnt several villages, and carried away the cattle and provisions. They intruded into Canacona with 2,000 soldiers. The Sondekar obtained a temporary cessation of hostilities by promising to enter into a treaty of peace. He sent an envoy to Goa but nothing definite could be agreed upon even after prolonged negotiations. The Viceroy then gave an ultimatum that he would begin hostilities once again if his terms were not accepted within twenty days. He insisted on three terms ; (1) Expulsion of the British, (2) Freedom of religion for Christians in Sonda, and (3) Dismissal of Krishna Rao, Captain of Ponda who had defied the Portuguese. There was no response from Sonda within the stipulated time limit and the Viceroy attacked Sadashivgad and Kurmagad, (Ximpi). He took both of them in November. Sonda's efforts to invade Salcete and Anjediva in Janary 1753 were beaten off. Hostilities dragged on until a truce was concluded in 1754. Later, on 2nd November 1755, a treaty was concluded. The conquered territories and forts were returned to Sonda who agreed to cede them three villages adjoining Portuguese territories. Besides, the Portuguese were to receive a war indemnity of 400,000 *ashrafis*. However, the villages in question were not handed over and the hostilities continued.[2]

On April 1756, the Peshva sent a general with 12,000 men to collect the arrears of tributes from the Sondekar. The arrears came to Rs. 8,00,000. He could pay only Rs. 2,50,000. He agreed to give Ponda to the Peshva's general as a security for the payment of the rest. Coming to know of this, Conde de Alva, Viceroy, marched against Mardangad on June 1, with a view to occupying it before it fell into the hands of the Marathas. He was chagrined to see the fort already under the Maratha occupation. He beat a hasty retreat ; but marched again into Ponda via Dhurbat and laid siege to Mardangad on June 28. However, heavy rains rendered his powerful guns useless. And suddenly 400 Maratha warriors came out and fell on the Portuguese. The Viceroy himself and 14 other *fidalgos* were killed. The

1. *Portugeja-Marathe Sambandh*, pp. 251, 253, 258; Saldanha, *op. cit.*, I, pp. 211-212, 214, 216; Biker, VII, pp. 288-295.

2. Saldanha, *op. cit.*, I, pp. 209-211, 212, 214; *Portugeja-Marathe Sambandh*, p. 237; Biker, VII, pp. 10-15, 32-36.

Marathas were triumphant. The Viceroy's body was handed over to the Portuguese. There was a rumour that he had been killed by his own men who did not like him.[1]

In 1762, the Portuguese entered into an agreement with the Bhonsle that they should co-operate with the King of Sonda to invade and take Ponda from the Marathas so that Sonda could have the place. The Bhonsle was to supply 1,500 men and the Portuguese were to help Sonda secretly with munitions, etc. The combined assault on Ponda took place in May 1763. By then the Portuguese were openly hostile towards the Marathas and led the attack with 700 men. The Bhonsle sent 500 men. Naraba Naik, Desai of Ponda joined them with his 70 men. Sonda, however, made no contribution. The Maratha garrison of the fort of Ponda, Mardangad, numbered 700. It defended the fort for a fortnight and then surrendered. The Portuguese flag was hoisted on the tower of the fort on June 1. The King of Sonda requested the Portuguese to give Ponda to him. But the Portuguese pointed out that he had made no contribution to the conquest of the place from the Marathas and therefore he had no claim to it. Nevertheless an agreement was entered into whereby the nominal sovereignty of Sonda over Ponda was recognised. Sonda was to maintain a Portuguese contingent at Ponda at his own cost. During the second half of 1763, Hyder Ali of Mysore attacked Sonda and by the beginning of the following year captured almost all the lands of the King of Sonda. The latter took shelter in Goa with his family and treasure in January 1764. He entered into a treaty with the Portuguese whereby Ponda, Zambaulim and Canacona were to remain with the Portuguese until such time when he would recover his kingdom from Hyder Ali. Ponda, Zambaulim and Canacona were saved from Hyder Ali because of the presence of Portuguese troops there, including the fort of Cabo da Rama. Hyder Ali's policy was to develop friendly relations with the Portuguese and therefore there was no warlike attempt by him to take over Ponda, Zambaulim or Canacona from them[2]

The King of Sonda did not succeed in recovering his kingdom from Hyder Ali. Ponda, Zambaulim and Canacona remained with the Portuguese. The King of Portugal gave a yearly subsidy for the expenses of the king of Sonda who stayed first at old Goa and then at Bandora in Ponda. He endeavoured at times to recover his kingdom by negotiating with the Marathas for help against their common

1. *Portugeja-Marathe Sambandh*, pp. 245-248; Pissurlencar P.S.S., *O Enigma da Morte do Vice-Rei Conde de Alva esclharecido a luz de documentos Maratas, Memorias, Classe da Letras*, VI, Lisbon, 1957; Saldanha, *op. cit.*, I, pp. 214-216.

2. *Portugeja-Marathe Sambandh*, pp. 260-261, 265-266; Saldanha, *op. cit.*, I, pp. 218-219, 390-393.

enemy, Hyder Ali. The Portuguese authorities did not like the ex-king of Sonda negotiating with the Marathas. The viceroy compelled him to cede Ponda, etc. on a permanent basis. This was done by a treaty between them on January 17, 1771.[1]

Peshva Madhav Rao as well as Hyder claimed Ponda, Zambaulim and Canacona. The Peshva claimed them on the ground that the King of Sonda was his feudatory and that the King had no right to transfer the lands to them. Hyder Ali's claim was based on he fact that he had defeated the King of Sonda and had captured his kingdom of which Ponda, etc. were but parts. However, neither pressed the demand to its logical conclusion as both hoped for Portuguese help against each other.

During the period of discentions and conflicts (1776-1782) between the supporters of Peshva Madhav Rao II and the latter's rival Raghoba, on the one hand, and the Peshva's party and the English on the other, the Portuguese knocked out some concessions from the Peshva's party. Friendly negotiations were commenced between Raghoba and the Portuguese in 1776. Raghoba was promised shelter and help at Daman. The Peshva's party was aware of this and they decided to wean the Portuguese away from him. A treaty of friendship was signed on January 11, 1780. The Peshva promised payment of Rs. 12,000 in appreciation of Portuguese friendship. The latter were authorised to collect revenue from 65 villages of the pargana of Nagar Haveli, not far off from Daman. They took over these villages on June 10, 1783. As the yield of these villages di not come to the promised Rs. 12,000, another order was issued authorising them to collect revenue from the remaining 7 villages of the pargana including the village of Dadra. These they took over on July 22, 1785. They became masters of all these 72 villages for all practical purposes, though their sovereignty over the villages was regarded non-existent.[2]

The Portuguese had territorial ambitions elsewhere too They coveted the lands between Bardez and the Tiracol river belonging to the Khem Sawant Bhonsle of Sawantwadi. He was a feudatory of the Peshva. In June 1781 the Chhatrapati of Kolhapur, rival of the Peshvas began to invade the Bhonsle's territories. The Peshva could not send any help. In August the Bhonsle sought Portuguese assistance of men and material.

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[1] Saldanha, *op. cit.*, pp. 231, 389-393.

[2] *Portugeja-Marathe Sambandh*, pp. 279-82; *Portuguses e Maratas*, VI, pp. 141, 144, 164-167. *International Court of Justice, Pleadings, Oral Arguments, Documents : Case concerning Right of Passage over Indian Territoty : Portugal v/s India*(Geneva)' 1960, I, 124-134; II, pp. 54-146.

The Viceroy of Goa sent his men to Maem in Bicholim on August 24. They took the Bhonsle's fort of Bicholim after some fight with his defenders. They then besieged the fort of Sanquelim too on the very day and took it within the next 24 hours. The Rane of Satari helped the Portuguese in this conquest. The Portuguese assured the people of Sanquelim and Bicholim that the later would be allowed their traditional way of life. The Bhonsle was shocked at the duplicity of the Portuguese. He was under the impression that the Portuguese were coming to his aid, but they occupied his lands. The Portuguese justified their action saying that he had been molesting their vessels since long and had been introding into their territories.[1]

The Bhonsle began his attempts to recover his lands from the Portuguese on October 1, 1782, with 1,000 men. Gululem, Maneri, Mencurem, Sal and Dumacem fell to him by the middle of November. Then he besieged the fort of Sanquelim. His strength had grown to 5,000 foot and 300 horses by then. In December the Portuguese sent substantial reinforcements to Bicholim and Sanquelim. The Bhonsle could not stand his ground for long before this onrush of disciplined troops. He was forced to withdraw. The Portuguese proceeded to invade Pernem on March 24, 1783, and hoisted their flag on the fort of Alorna on April 2.[2]

Fearing that the whole of Pernem might fall to the Portuguese, the Bhonsle sent an envoy to Goa and sought peace. The Portuguese willingly stopped the war. They were aware that the Peshva and the English had come to terms and that the former might send help to the Bhonsle. As a matter of fact, an envoy came from the Peshva to Goa to mediate between his feudatory and the Portuguese. Neither envoy succeeded in his attempt to make the Portuguese return any of the conquered territories and had to go away empty handed.[3]

In 1785, the Chhatrapati of Kolhapur commenced hostilities against the Bhonsle once again. Both the belligerents sent envoys to Goa seeking Portuguese help. The latter were willing to help the Bhonsle as they did not wish him to be overcome by the Chhatrapati who would be a more dangerous neighbour. They agreed to help the Bhonsle on condition that the remaining lands of Pernem were ceded. The condition was accepted and a treaty was concluded on January 29, 1788. The Portuguese took possession of the ceded lands on February 4.[4]

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1 *Portugeja-Marathe Sambandh*, pp. 287-289; Biker, VIII, 160 ff.
2 *Ibid.*, pp. 289-291.
3 *Ibid.*, pp. 291-292.
4 *Ibid.*, pp. 293-294.

STRUGGLE FOR FREEDOM (1780—1947)*

The New Conquest

The Old Conquest which was begun in 1510 with the acquisition of Tiswadi, was complete when Salcete and Bardez were added to it in 1543 by defeating Ibrahim Adil Shah. In 1570 the success of the Portuguese over the combined forces of Adil Shah and Nizam Shah in the battle of Chaul confirmed their rule in the conquered territory permanently.[1]

Having consolidated their rule in Tiswadi, Salcete and Bardez, the Portuguese looked out for further conquests. In 1741, they invaded Sadashivgad belonging to the rulers of Sonda and forced them to part with Paroda, Molem and Siroda. Later, in the wars between the Marathas and Hyder Ali of Karnataka, the rulers of Sonda sought the help of the Portuguese in order to protect their small kingdom on the condition to cede to the Portuguese Antaruj alias Ponda and the Panch Mahals i.e., Hemad Barshe. Zambaulim *alias* Ashtagar, Cacora, Bali, together with Chandrawadi and Canacona. In lieu of this the Portuguese were to give 20,000 *Ashrafis* to the rulers of Sonda annually, and to continue the grants and *inams* in the latter's kingdom, donated for the maintenance of temples and *Agraharas* as before. This treaty was confirmed in 1791.[2]

Pernem, Bhatagrama and the Satari Mahal became part of the Sawantwadi kingdom as a result of the fall of Adil Shahi in 1685. This naturally gave rise to constant conflicts between the Portuguese and the Bhonsles of Sawantwadi, as the newly acquired territory of the latter bordered on the Bardez Mahal of the Portuguese. In 1746, the Portuguese attacked the territory of the Savants and seized the forts of Acaro, Tiracol and the Satari Mahal. The sea-forts of Acaro and Tiracol were of strategic importance. In 1781 the Portuguese conquered Bhatagrama and in 1788 secured Pernem Mahal from the Savants for the help rendered to the latter against the rulers of Kolhapur.[3]

Thus by 1788, what is known as the New Conquest-Pernem, Bicholim, Satari, Ponda, Quepem, Sanguem and Canacona was complete, and the Portuguese were masters of the territory between Sawantwadi in the north and Karwar in the South, and Supa in the East to the West coast.

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* This section has been contributed by Dr. B. K. Apte, Panaji, Goa.

1. *Ajacha va Kalacha Gomantak*, 1954, edited by the Roupya Mahotsava Samiti, The Goa Hindu Association, p. 40.
2. *Ibid.*, p. 59.
3. *Ibid.*, pp. 60-61.

Revolts against the Portuguese

The Portuguese rule in the Old and New Conquests soon proved to be a catastrophe to the Hindus at large. The religious intolerance of the Portuguese, the inquisition they established to suppress heresy, and the discriminating treatment meted out to the Hindus, politically, socially and economically, was without precedence. The Muslim population had been massacred following the Old Conquest. With the passage of time, even the convert Christians who for sometime enjoyed the favours of the Church and the State were treated as inferior citizens. This was inevitable because of the domination of the priestly class over administration. No wonder that this situation should have resulted in revolts against the satanic Portuguese government both from the native Christians and the Hindus when time seemed favourable to them.

The Pinto Revolt.

Towards the end of the eighteenth century the native Christian missionaries of Goa rose in revolt against the domination of the white missionaries. Native missionaries, though learned and dutiful, were not offered higher posts. The same was the fate of the Christian laity in Government service. The predominance of the Dominicans, Franciscans and the Jesuits was felt in every walk of life. The indigenous clergy and the laity joined hands to overthrow this white supremacy. The leaders of this revolt were two learned priests, Caetano Francisco Couto of Panaji and Jose Antonio Gonsalves of Divar. They were denied bishopric despite their learning and sincere work, because of their black skin. They had been to Portugal to plead their case, but had to return frustrated. During their sojourn there, they met Jose Custodio de Fariaa learned priest of Goa known as Abbe Faria during the restless days of the French Revolution. Inspired by Faria, the two Goan priests returned home determined to overthrow the supremacy of the whites in Goa. Their objective was to drive the Portuguese out and establish a republic in Goa. They had secretly registered the help of the native priests and some army officers in their plot against the government. One Father Pinto offered his house to the conspirators. A day was appointed for a general rising, but unfortunately prior intimation was received by the Governor of Goa and the whole thing was completely foiled. About forty-seven persons including seventeen priests and seven army officers were severly punished for treason. This revolt which took place around 1787 is better known as the Pinto Revolt.[1]

The Revolt of the Ranes

The Ranes of the Satari Mahal bordering between the Sawantwadi State and Goa made several attempts to regain their territory lost

1. *Ajacha Kalacha Gomantak*, 1954, pp. 62-63.

to the Portuguese in 1740. At one time they were friends of the Portuguese as they had helped them against the Bhonsle's of Sawantwadi. In 1740, the Portuguese occupied Sanquelim and the Satari Mahal of the Ranes and promised them to protect their age-old rights and privileges which they had been enjoying. The Ranes were, however, soon disillusioned about the promises made by the Portugues. The intention the Portuguese was to bring the Satari Mahal under their law and administration as throughly as the territory of the New Conquest. Till 1822 the Ranes rebelled against the Portuguese over a dozen times, and upto 1897 attacked Portuguese outposts on several occasions making inroads into their territory from the vastness of the hills and dales of Satari. The aim of these wars was to regain the lost territory and freedom. The Ranes were supported by the common people who were eager to sweep out the intolerant, obnoxious rule of the Portuguese. This long struggle from the commencement of the nineteenth century to 1897 which ended in a compromise, was a war of independence successfully fought by the Ranes.

As the tradition goes, centuries ago, the Ranes migrated from their original habitat in Rajasthan to Satari in Gomantaka under the leadership of one Satroji Rane. They conquered Satari and permanently settled there. They consider themselves to be descendants of a Kshatriya clan of Rajputana, and are different from the other ruling clans of Gomantaka so far as their customs and rites are concerned.

In 1851, the Governor of Goa clamped upon the subjects the satanic laws of the Portuguese and imposed taxes upon the *inams* and *mokas* enjoyed tax-free so far. To make matters worse, by a government decree, men were forced to put on pantaloons and ladies to wear bodice against their customs. The Portuguese soldiers appointed to find out the incidence of the decree raped several women on the pretext of inspection. The Satari Mahal of the Ranes was not free from these crimes committed on their women by the white soldiery. In deep disgust the people of Satari rallied round their leader Dipaji Rane to overthrow the Portuguese rule in 1852.

At the outset, Dipaji Rane took by surprise the fort of Nanus on the bank of Madei river in the Satari Taluka and seized a good deal of ammunition and arms stored there. For sometime this fort was the main base for further military operations. Very soon Dipaji was successful in driving the Portuguese out of Satari Mahal. The long cherished dream of the Ranes to regain freedom was fulfilled. With the fall of Satari, the Dessais, Gaonkars and other landlords of the neighbouring area joined Dipaji's forces and the augmented army liberated Quepem, Canacona, Hemad Barshe and Bhatagrama from the long Portuguese rule

For the maintenance of his large force Dipaji looted government treasury and often extorted money from the rich. But he never touched the poor. Dipaji's resources and army were quite limited compared to those at the command of the Portuguese. However, Dipaji successfully defended his territory by resorting to guerilla war tactics. The hilly tract of Satari was well-suited to Dipaji's strategy. At one time Dipaji was successful in taking possession of even Cumbarjua. When all attempts against Dipaji failed, the Governor himself set out with a large well-equipped army. But once again Dipaji fizzled out the Portuguese plan to arrest him. Dipaji's freedom struggle soon gained for him the fame of a legendary hero in Satari and the surrounding Mahals. The Portuguese had been unsuccessful against him for three years and a half, and had spent a huge amount of money for the maintenance of an extra force. At last the Government deputed an army officer named Jose Paulo d'Oliveiro who was on friendly terms with Dipaji. A meeting was arranged between Dipaji and the Governor of Goa, but the Governor refused to see Dipaji as he had come alone. i.e. without his colleagues. Dipaji had taken care to have three sons of Pegado as hostages before his meeting with the Governor. At last in 1855, the Portuguese government entered into a treaty with Dipaji. They agreed to protect all the rights of the village councils, to withdraw the enforcement of all obnoxious religious injunctions, to provide seeds and agricultural implements to the farmers, to raise a platoon of the Marathas of Satari with a view to retaining their martial spirit, and to grant amnesty to all those who had participated in the revolt. Dipaji was presented with dress and a sword, and honoured with the title Captain. He was taken in a procession through the streets of Bicholim. Thus came to a successful end the freedom struggle of Dipaji Rane.[1]

About this time there was another rising of the people led by one Kushtoba of Sanquelim. He was brave and pious and was helped by one Shamba Desai. He harassed the rich for money. Both were taken by surprise and killed in 1871.

Unfortunately, the treaty with Dipaji Rane proved to be shortlived. The Portuguese soon revived their repressive measures in Satari. They introduced monopoly system in land cultivation. This benefitted the monopolist or the contractor at the cost of the actual cultivators. The cultivators' repeated appeals to abolish this system were not paid heed to by Government, and there was widespread dissatisfaction among them. At this time—1895—the Government issued a decree forcing Goan soldiers to sail to the Portuguese African Colonies to suppress the revolt of the Cafri tribe. Crossing the seas was tabooed by religion

1 *Ajacha va Kalacha Gomantak*, 1954, pp. 64-67.

involving loss of caste and was therefore dreaded by the Hindu soldiers. They appealed to the government not to send them overseas on duty. The government was adamant. The disgruntled Hindu soldiers joined hands with the tillers of Satari who had already an axe to grind against the government, with a view to getting their wrongs redressed. One Dada Rane Advaikar was the leader of the soldiers and tillers The government suspected that the severe criticism which had appeared in a local paper run by a missionary, Francisco Alvares, bringing to light the misdeeds of some European officers, was an additional cause responsible for the rising of Dada Rane and his followers. Ultimately Alvares and his associates were banished from Goa. This rising of the soldiers and farmers of Satari reminds one of the great revolt of 1857 in India, in which both the classes played a significant role.

Dada Rane, like his predecessor captured the strategic fort of Nanus. He made deep inroads into Bardez and looted government treasury at different centres. Martial law was proclaimed throughout Goa with a view to arresting the spread of revolt. Baba Savant, the Dessai of Hemadbarshe joined Dada with his followers. When Dada approached Aguada there was terrific alarm in Panaji, and special walls were erected for its defence. The new Governor Joaquim Machado who realised the gravity of the situation brought about a treaty with Dada Rane through the mediation of Shri Shankaracharya of Sankeshwar, the spiritual guru of Dada. All the terms of Dada Rane were accepted and his associates were pardoned.

During this unrest, two local rebels, Pavate Nadkarni and Phato Borker, roamed with their gangs in Gomantaka looting government property. They also destroyed a few churches.[1]

By the end of the nineteenth century, the Ranes of Satari Mahal once again gained their rights and privileges as before.

In 1917 the Ranes revolted against the enhancement of their taxes. This time the revolt was mercilessly suppressed and the leaders deported to the distant African settlements.

The English design to occupy Goa

The Pinto Revolt and the early risings of the Ranes of Satari coincided with the Napoleonic wars which engulfed the whole of Europe for about fifteen years upto 1815. The Ranes and their associates were not aware of what the Man of Destiny was doing in Europe. But dissatisfied local Christian missionaries like Abbe Faria were aware of the gravity of the great event. They knew that though Napoleon would be defeated, the principles of the French Revolution

[1] *Atacha va Kalacha Gomantak*, 1954, pp. 69-70.

would spread all over Europe like wild fire. British India was then under the governor-generalship of Lord Wellesley, known for his 'forward policy'. His brother, Sir Arthur Wellesley, later known as the Duke of Wellington was engaged in defeating Napoleon. Both the brothers were imperialists of the first order.

The French had laid a deep plot for the invasion of Goa. Tipu Sultan of Mysore was a great friend of Napoleon. He proudly called himself a Jacobin. With his help the French were to occupy Goa. A large fleet was to sail from Brest for the invasion of Goa. Fortunately for the Portuguese the fleet never arrived in Goa.

As early as 1785-1793, the British in India had offered to help the Portuguese against the French. In 1798 the English admiral Reiner sailed to Goa with four battle-ships under orders to help the Portuguese. But the governor of Goa politely refused it. Next year, Sir William Clarke arrived with a large army equipped with artillery, and occupied the fort of Aguada and the Panaji palace. The governor, Veiga Cabral requested Lord Wellesley to withdraw his forces. The reply sent by Wellesly was that Goa was in great danger then, than ever before. In the meantime, there was a temporary lull in the European war due to the Peace of Amiens, and Wellesley had to call back his army from Goa. However, part of the English army remained in Aguada and the palace at Panaji as late as 1815.

In 1839, the English again attempted to take Goa on the pretext that some Portuguese officers in Goa had given shelter to a few rebels from the British territory. This complaint coming from the government of Bombay, was communicated to the Portuguese through the British ambassador, Lord Howard at Lisbon. The Portuguese at this time, it seems, owed a huge amount of debt to the British. The Lisbon government through the governor of Goa wrote to the British Government that they were misinformed by their Bombay officers, and Goa had not sheltered absconders from British India. The real intention of the English was obvious when they offered £500,000 for the purchase of the Portuguese possessions in India—Goa, Diu and Daman. This was of course turned down by Lisbon.[1]

Yet another attempt to threaten Goa was made by the British in 1842. One Phond Savant of Wadi had raised the standard of rebellion against the British. Colonel Outram completely defeated Phond Savant. The Savants were given asylum by the Portuguese as they were their age-old neighbours. On this, the English at Bombay sent Captain Arthur to Panaji with a force. He trained his guns on the palace of Panaji and threatened to blow it off if the Savants were not surrendered to him. The Viceroy of Goa politely pointed out that

[1] C. F. Saldanha, S. J. ; *A Short History of Goa*, 1957, pp. 125-127.

the English demand was not in keeping with international law that prevailed. The Political Agent at Sawantwadi, came to Goa to take possession of the Savants but did not succeed. At last in 1847, through the mediation of the Portuguese government some of the Savants were pardoned by the British. A few of them however, were deported for life.

Since the establishment of the Portuguese rule in Goa in 1510 to the end of the first quarter of the nineteenth century, Portugal and her colonies were under absolute monarchy. The manpower and resources of Portugal were meagre compared to the vast dominions she held scattered over wide areas beyond the seas. With the passage of time she had to face tough opposition from the Dutch and the English in respect of trade and colonies. Again she had to wage long wars with the native rulers in the areas of settlement. Visualising these difficulties, the farsighted Afonso Albuquerque encouraged marriages between the Portuguese and the native women in Goa, as was done in other Portuguese colonies. He knew well that the progeny of these mixed marriages would remain Christian and therefore loyal to Portugal. These new Christians were given equality of rights with the Portuguese. This wise policy of Albuquerque bore fruit beyond expectations. It was further strengthened by the fanatic zeal of St. Francis Xavier to Christianise the natives by force when persuasion failed. Sword and the cross thus laid the foundation of the Portuguese empire in India and elsewhere[1] However, in their train, they created new problems in the colonies which are difficult of easy solution to this day, and have left beyond bitter memories perpetually.

By the middle of the seventeenth century, the Goan society was divided into five main categories. The Portuguese coming from the mother country for administration considered themselves to be superior by virtue of their status and power. They went back to Portugal after retirement. They were known as *Reinois* or rulers. Such of the Portuguese who stayed in Goa seeking higher positions in Government were called *Castico*. The next class was of the Indo Portuguese or *Mestico*, born of mixed marriages. Then came the Hindus converted to Christianity known as *Kanari*, and the last class consisted of the vast Hindu majority named as *Gentios*.[2] Thanks to the Hindu caste system, it preserved its own higher culture and majority in spite of forcible proselytization carried on by the Portuguese. The first two classes were the most favoured in services and other privileges. The last i.e. the Hindus were pagans, looked down upon and despised

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[1] Anant Kakaba Priyolkar, *The Goa Inquisition*, Bombay, 1961.

[2] Balkrishna Vaman Savardekar, *Gomantak Parichaya*, 1920, p. 98 *Ajucha va Kalacha Gomantak*, 1954, p. 327.

Various discriminating taxes were imposed upon them which shade into insignificance the most hated *Jizya* (poll-tax) reimposed by Aurangzeb. They were given third rate citizenship. Coercion, religious intolerance, conversion and discriminating economic treatment were the tools by which the Portuguese divided the society and ruled for four centuries and a half. It was Marques de Pombal who in 1775 gave the same rights to the convert Christians, which were so far enjoyed only by the Portuguese. This policy went a long way in bridging the gulf between the native Christians and the Europeans in Goa. The Hindus however, were not given equality of rights.

Constitutional Rule in Goa

As a result of the liberal principles of the French Revolution, limited monarchy with Parliamentary control came to be established in Portugal in 1820. However, the Parliament started functioning effectively as late as 1833, when the Liberals gained a final victory over the Absolutists. During this period, Goa was to be represented in the Parliament of Portugal by six representatives. Later, the election commission reduced this number to three. The first three representatives elected were Dr. Bernardo Peres de Silva, Constancio Roque de Costa and Dr. Antonio Jose de Lima Leitao, all Liberals. At first the right to elect the representatives was confined to the Old Conquest. It was extended to the New Conquest in 1845 to those who could read and write Portuguese. In 1895 only one representative was sent to Portugal. In the elections the Goan Christians figured prominently. The Hindus got the right to vote since 1845, yet they suffered from a number of disabilities imposed upon them.[1]

The introduction of Constitutional Government divided the Goans into two groups. Reinois or the Absolutists and Naturais or the Liberals. The former group was mainly supported by the military junta, whereas the latter drew its strength from the local Christians. Majority of the Hindus were with the Liberals. Severe difference between these groups resulted in violence and bloodshed till the matter was finally settled first in Portugal and then in Goa.

The Army

The Goan army has played a vital role in maintaining the Portuguese rule in Goa. Majority of the recruits were from the convert Christians as they were more loyal to the rulers. The Hindu and Muslim soldiers came from the New Conquest. It was the genius of Albuquerque to recruit Goan troops in his army under their own officers. This helped defend Goa from the invasion of the Bhonsles of Sawantwadi and the Marathas. The Military Academy at Goa was founded in 1817.

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1 *Ajacha va Kalacha Gomantak*, 1954, p. 328.

imparting training in infantry, navigation and artillery. This increased the efficiency of the army and produced great military leaders. Some of them distinguished themselves in actions overseas. For instance, Lieutenant Jose Inacio de Sousa Gaspar led the famous expedition for the defence of Macao in 1887. In 1889, Captain Lucio Faria, Ensign Constancio Barreto, and Dr. A. M. da Cunha led the expedition to Mocambique and held on till reinforcements arrived. The Goan who made a name by his fierce fighting on the battlefield of Africa was Captain Manuel Antonio de Souza from Mapusa, nicknamed the Fearless, by the negroes. His daughter, Dona Vitoria Adriana de Souza suppressed a tribal revolt for which she was awarded the Order of the Tower and Sword—*Torre e Espada*. In 1870, the Goan army was disbanded as there was no danger of invasion. It was therefore thought unnecessary to maintain it at great cost. The Military Academy was closed down. For sometime this created disturbance in Goa but they were soon quelled.[1]

Railway and Telegraph

By the Anglo-Portuguese Treaty of 1878, the port of Mormugao was opened for Railway traffic with India. Railway line was laid in 1881, connecting Goa with the rest of India The first Telegraph line was laid between Goa and Belgaum in 1857. River navigation also received great attention. This increased trade between Goa and India. and encouraged enterprising Goans to migrate to Bombay, Pune, Calcutta and Karachi to earn a better living. Towards the end of the century, a number of Goans migrated to East Africa and made a fortune.[2]

Language Policy

In the field of education, the policy in the early period was to suppress both Marathi and Konkani. Marathi since historic times has mainly been the literary language of Goa, and Konkani the spoken language. In the Old Conquest, Portuguese was made compulsory for all irrespective of their religion In 1745, Dr. Frei Lourenco da Santa Maria, the Arch Bishop, issued a decree according to which Christians who failed to learn Portuguese within two years were not allowed to marry. Hindus were forbidden to keep religious books, sheir religious books in Marathi were burnt. Compulsory knowledge of Portuguese was an instrument designed to make Goa a part of Portugal permanently. But the effect of this policy on the Goan population was disastrous. The Christian population was cut off from Marathi, the literary language and source of knowledge, and was never able to gain proficiency in Portuguese, worth the name. It remained backward. Only a small

1 Saldanha, *A Short History of Goa*, 1957, pp. 138-140.
2 *Ibid.*, pp. 150-151.

section of the population consisting of both the Hindus and Christians had a good knowledge of the alien Portuguese. The Christians developed their own Konkani, pregnant with Portuguese words different from the Konkani of the Hindus. Hindus and Christians were thus separated from one another though they originally stemmed from the same culture.

In this situation, the Hindus preserved Marathi on sufference. They continued to hold Marathi classes in private houses, public temples and under shady trees in the villages.

The Republic

The establishment of the Republic in Portugal on 5th October, 1910, ushered in a new era in the modern history of Goa. The long monarchical rule came to an end. The Church was separated from the State at least in theory, and for the first time the Hindus of Goa regained their religious freedom denied to them from the beginning of the Portuguese rule. As citizens, they were now on par with the Christians, the chosen subjects of the rulers. The Hindus therefore hailed the proclamation of the Republic with great joy. In practice however, the promise of economic and administrative autonomy to the Dominions was fulfilled only partially.

The Charter granting autonomy to Portuguese India was proclaimed in 1917. By this, an advisory council, known as *Conselho do Governo* was created. It was to consist of nine Government nominated officials, ten elected representatives of the people with the Governor as its President. This was to come into being on 1st July 1918 according to the order from Portugal. But unfortunately, on the very day of the inauguration of the Council, its existence was suspended by another order. In protest, Menezes Braganza, a famous leader, organised a mass rally at Margao denouncing the new order. Finally by 1920, the Council came to have seven nominated government officials including the Governor as its President, and eleven members elected by the people. The Council was renamed as the Legislative Council, Concelho Legislativo. This arrangement continued till the beginning of the Salazar dictatorship on May 28, 1926.[1]

The Republican rule though not an unmixed blessing, witnessed an all-round awakening among the people of Goa. Two forces were at work in this direction, the desire of the Goans to march with the time and the constant impact of the progressive socio-political movements from across the Indian border. As these two forces gathered momentum, the four hundred year old artificial political barrier that separated Goa from the rest of India, began to crack.

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1 *Ajacha va Kalacha Gomantak*, 1954, pp. 330-331.

Goa and neighbouring districts

Geographically, Goa is an extension of Konkan which is the westernmost part of Maharashtra bound by the Sea and the Sahya mountains. Historically, Goa and Konkan together with the neighbouring territory, were ruled by common dynasties till the advent of the Portuguese in Goa. In addition, Goa and Maharashtra are inseparably tied together by the common bond of Marathi. With the rise of Bombay, a number of Goan families migrated there permanently for a livelihood. The Census of 1780 records as many as 409 Shenavis i.e Goans in Bombay. Scholars and thinkers like Govind Narayan Madgaonkar, Dr. Bhau Daji Lad, Madhav Chandoba Dukle, Dr. Gerson de Cunha, Justice Telang, Sir Narayan Chandavarkar and Joaquím Alva who had settled in Bombay have left a signet of their contribution in the history of modern Bombay.[1] The Bhandarkar Oriental Research Institute, Pune, is named in honour of Dr. Ramakrishna Bhandarkar, an Indologist of world fame, who hailed from Goa but made Pune his home. From time to time Goans have been influenced by Maharashtrian thinkers and patriots like Justice Ranade, Namdar Gokhale, Agarkar and Swatantryavir Savarkar. Before the Gandhian era, Goa was swayed and inspired by the patriotism of Lokamanya Tilak, the Father of Indian unrest. His mouthpiece, Kesari, had a good circulation among the elite of Goa. Viewed against this background, one can understand why Maharashtra considered the Liberation of Goa as her special concern recognising at the same time the part played by the whole of India and the Goans in this great movement. The concern of the Maharashtrians for Goa is well reflected in the *shuddhikarana* or reconversion of the Gavada community by the leaders of the Brahmacharyashrama, Masur, in the district of Satara. Under the leadership of Dharmabhaskar Shri Vinayak Maharaj Masurkar, a careful study of the Gavada community which was Christianised long ago, was undertaken with the help of the local Hindu leaders of Goa. It was found that the Christian Gavadas were eager to come back to Hinduism, and if reconverted *en masse*, would have no problems of marriage and other social taboos. With great tact, courage and missionary zeal, the Masur Ashrama was able to bring back as many as 7,815 Gavadas from Christianity to Hinduism.[2] This was a stunning blow to the Christian Missionaries of Goa. The proselytization of the Hindus aimed at their denationalisation had failed at least in the case of Gavadas.

It may be noted that the Almeida College, Ponda, founded by Dada Vaidya, Sitaram Kerkar and others was joined by Haribhau

[1] Priyolkar A. K., *Goa Re-discovered*, 1967, p. 14.

[2] Kshirsagar S. D., *Gomantak Shuddhicha Itihasa*, Shaka 1852, Uttarardha, pp. 7-8.

Phatak and Dattopant Apte of Pune in 1911.[1] The latter, a well-known historian and follower of Lokamanya Tilak, came to Goa to study the possibility of effecting an armed revolution against the Portuguese. He had established contact with the Captain of a German ship interned in the Goa harbour during the First World War, with a view to securing arms and ammunition. But he gave up the idea of a revolution when he found that the organisation and man-power required for it were lacking and he himself had no training for such a venture.

Goa into the Mainstream

With the coming to power of Salazar in Portugal on 28th May 1926, the formal republican rule in Goa came to an end. The sword and cross once again took hold of the administration in Goa. Salazar was destined to be the last in the line of the cruel adventurers like Vasco-da-Gama and Albuquerque who had come here to make Goa a part of Portugal forever. Now the struggle was between Salazar's dictatorial government trying to keep Goa under Portugal's control with all the repressive measures at his command and the Goans aspiring to be free with the tremendous backing of the whole of India. In this fight Goa was not alone as in the past. Goa was an integral part of India. It was not possible for the Portuguese to cling to their tiny enclaves in India, when the vast British empire in India and elsewhere was fast giving way to the nationalist forces during the period of the two World Wars. The British were wise enough to quit India in time. But the Portuguese clung fast to Goa, Daman and Diu till they were driven out lock, stock and barrel by the Indian army after a petty fight.

After depriving the Goans of the little freedom they had been enjoying under the Republic, the Salazar Government entered into an agreement with the Papal authority in Rome in 1933, by which the Christian Missions were regarded as instruments or means for the stability and prosperity of the Portuguese empire. This was an ugly, out of date union of the sword and the cross, destined to be shortlived.

A number of curbs were imposed upon civil liberties. For any public political meeting, Governor's prior permission was necessary. For other meetings the local Mamlatdar had to be informed. A meeting proposed to be held to pay homage to the memory of the late Motilal Nehru was disallowed. Severe restrictions were imposed on the Press. Titles of books and periodicals to be published had to be passed by the Governor. Newspapers bringing out their issues

1 Savardekar, *Gomantak Parichaya*, 1920, p. 74.

more than four times a week had to deposit seven to eight thousand rupees in the bank as security.[1]

During the Second World War, restrictions were laid on the necessities of life coming from India to Goa by the Indian Government. Goa has always been deficient in rice, the staple food of the people. Hardships of the common people began to mount when imports from India lessened and consequently gave rise to black marketing. The mining industry in Goa though created some employment, made the rich richer, widening the gap between the haves and havenots.

Goa Congress Committee

The Goa Congress Committee was founded in 1930 and worked on the same lines as the Indian National Congress and secretly sent its representatives to the latter body during its annual session.

In 1936, a branch of the Goa Congress was established in Bombay,[2] with the purpose to secure the help of the large number of Goans in Bombay, to keep in touch with the Indian National Congress.

By the time, the Quit India movement of 1942 had been launched. In Goa many freedom fighters were arrested for offering satyagraha in the 1942 movement. The Quit Goa movement gained momentum when Dr. Ram Manohar Lohia, the Socialist Party leader, at the request of the Goans addressed a public meeting on the Municipal ground of Margao on the 18th June 1945. On 20th June, Dr. Lohia left Goa.[3] His short stay lit the freedom struggle in Goa, which the Portuguese were unable to arrest. The 18th June Road in the capital city, Panaji, is named in memory of this historic event.

On 11th August, 1946, the All India Congress Working Committee held its session at Wardha, and passed a resolution on Goa. The freedom struggle of the Goans was blessed, and Mahatma Gandhi in the issue of the 'Harijan' of 18th August gave his full support to the resolution of the Congress Working Committee. The details of the Goa freedom struggle from 1947 onwards are described in the following section—Nationalist movement.

NATIONALIST MOVEMENT (1947—1961)*

With the advent of the dictatorial regime of Salazar in Portugal in 1926, people's freedoms were curbed and by passing the Colonial Act of 1933, all civil liberties were suppressed.[4] There was complete

*This section has been contributed by Shri B. D. Satoskar, Carangalem, Goa.

[1] *Ajacha va Kalacha Gomantak*, 1954, pp. 331-334.

[2] *Ibid;* p. 334.

[3] *Ibid.*, pp. 336-337.

[4] Article 8 of Political Constitution of 1933.

ban on freedom of expression or assembly.[1] All newspapers were censored.[2] During the 17th, 18th and 19th and early part of the 20th century, the freedom struggle in Goa had assumed essentially violent form. With the emergence of Mahatma Gandhi on the Indian scene, the pattern of the nationalist resistance to the Portuguese rule in Goa underwent a radical change. In 1928, prominent Goan political leaders formed the Goa Congress Committee with the main object of fighting for civil liberties for Goans, on the lines of the Indian National Congress. It was also affiliated to the Indian National Congress till 1934.[3] Due to the oppressive laws of the dictatorial regime, the Goa Congress workers found it difficult to carry out their programmes. A branch of the Goa Congress Committee was set up, therefore in Bombay by the Goan political workers in Bombay and also Goa in 1936. The work of moulding the public opinion in favour of liberation movement was carried out by the Congress Committee till 1942 by bringing out publication about the atrocities perpetuated by the Portuguese during their 425 years rule in Goa.[4] The 'Quit India Movement' of 1942, had its impact on the Goan political workers. One of the prominent Goan political workers who had participated in the 'Quit India' Movement' was released from the British jail in 1946. On his release, the Goa Congress Committee resumed its activities and in its general meeting held at Bombay on 3rd March 1946, it passed a resolution, "The Goa Congress Committee adheres to the National call of 'Quit India' demand of Indian National Congress and call upon the Portuguese to leave the shores of Goa, Daman and Diu so that we can achieve our destiny in common with the rest of India".

On the eve of 18th June 1946, Goa seemed to be on the precipice of an erupting volcano. The Goan youth was awaiting the signal for channelising their anger against the alien Portuguese rule, in an organised manner, when a prominent leader of the Indian National Movement addressed a meeting, on the Municipal ground at Margao, defying the Portuguese laws. The Portuguese authorities arrested the Indian leader of the National Movement, kept him at Fort Aguada and later on deported him to Belgaum, then in British India. There began in Goa an open campaign for civil liberties. The first sign of revolt was seen in the defiance of the Portuguese ban on holding meetings.[5] The struggle was to last for 15 anxious years, till the liberation of Goa. In this struggle for freedom the Goan youth gave

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[1] Special Law No. 37.477 of 13th June 1949.

[2] Article 22 of Political Constitution of 1933.

[3] Cunha T. B., *Goa's Freedom Struggle*, Bombay, 1961, p. 195.

[4] Jorge Evagrio, *Goa's Awakening*, 18th June, Silver Jubilee Celebrations, 1972, p. 11.

[5] Menezes Juliao, *Goa's Freedom Struggle*, Bombay, 1947, p. 47 ff.

vent to their suppressed feelings and created such an atmosphere of terror and tearing, that put the Portuguese Government almost on the defensive. The Portuguese let loose a reign of oppression but never succeeded in crushing the spirit of the Goans, who were determined to wrest from the Portuguese the freedom of their motherland. Thus, there began in Goa, an open campaign for civil liberties on the 18th June 1946. Mahatma Gandhi gave support to this civil disobedience movement in the following words, " .. ..according to Dr. Lohia's statement, for 18 years now the people of Goa have been robbed of the right to hold meetings and form organisations. Naturally he defied orders. He has thereby rendered a service to the cause of civil liberty and specially to the Goans.........In free India, Goa cannot be allowed to exist as a separate entity in opposition to the laws of the free state..... ...I will say that they should shed fear of the Portuguese Government.........and assert their fundamental right to civil liberty and all it means "[1]

In August 1946, a meeting of the Goan political workers was held at Londa with a view to draw the future plan of action. The National Congress (Goa) was formed to continue the struggle.[2] The campaign for civil liberties was developed on Gandhian lines. Men and women participated in the mass civil disobedience programme held at fixed intervals at different places in Goa, Daman and Diu. Men, women and students participated in the satyagraha movement *en masse* defying prohibitory orders. The movement was peaceful but the Portuguese authorities tried to suppress it by force. Hundreds of people were arrested and were tried by special military tribunal The political leaders were awarded sentences of not less than 8 years imprisonment and deported to Peniche, an island prison off the coast of Portugal and to Angola in Portuguese Africa. The satyagrahis were awarded punishments of imprisonment, not less than 6 months.[3] This campaign of freedom movement was known as *Jai Hind Movement*.[4] It continued during the months of June to November 1946. About 1,500 Goans were arrested during this period, held in police detention for varying terms, beaten or otherwise subjected to police excesses. The freedom struggle which had now gathered momentum witnessed a heartening spectacle of Hindu and Christians joining hands and facing onslaught of Portuguese oppressions.[5]

1 Harijan, 30th June 1946.

2 Mascarenhas Lambert, *Goa's Freedom Struggle*, published by Freedom Fighters Association, Panaji, 1972, p. 2; Jorge Evagrio, *Goa's Freedom Struggle*, Panaji, *1971* p. 23.

3 *Case concerning right of passage over Indian territory Portugal V India*, Vol. III, Annexure 15, Appendix 6.

4 Menezes Juliao, *op. cit.*, pp. 51, 75.

5 Souza Zotico P., in *The Freedom Movement down the years* in *Goa's Freedom Struggle*, p. 4.

In 1947, the year of the Indian Independence, the Portuguese Government took extreme measures to suppress the liberation movement. The Military forces were strengthened by importing European troops. At the second session of the National Congress (Goa) held in April, 1947 a section of its members formed an Azad Gomantak Dal and started armed struggle against the Portuguese.[1] The Goan freedom struggle thus went underground. Inside Goa, the movement was continued only in the form of surreptitious distribution of literature, hoisting of the National flag of Independent India. The Political statute offered by Lisbon could not fulfil the aspirations of the people and was thus rejected. The third session of the National Congress (Goa) was held at Carambolim in Goa, in 1948. The President of the Session was arrested and later on sentenced to imprisonment of 15 years and deported to Angola.[2] The fourth session of the National Congress (Goa) was held at Belgaum in 1949. It adopted a resolution about the complete liberation of Goa from the Portuguese domination and its integration with the Indian Union by following non-violent methods. The fifth session of the National Congress (Goa) was held at Londa. A programme of collective satyagraha was formulated. The office of the National Congress (Goa) was shifted to Bombay in 1951. The first phase of satyagraha movement was slowed down by 1950. However a large number of Goan political leaders were arrested during 1947 to 1953, for the satyagrahas offered by them on the 18th June day, 15th August, the day of Independence of Bharat, 2nd October, Mahatma Gandhi Jayanti, etc., and sentenced to imprisonment from 15 to 28 years and deported to Angola and Cabo Verde[3]

The volunteers of Azad Gomantak Dal, the militant organisation of freedom fighters, were active in attacking police chowkis, disrupting the road traffic, cutting down telephone wires, etc., thereby paralysing the smooth working of Government. Some of the volunteers of the Dal were sentenced to 28 years imprisonment and exiled to Angola.[4] The leaders of the Azad Gomantak Dal also shifted their activities to border areas and from there carried on raids into the Goa territory attacking police chowkis, other Government offices, etc. In 1954, they established the Azad Goa Radio in the border areas to counteract the anti-Goa liberation and anti-Indian propaganda of the Portuguese. The Azad Gomantak Dal carried on its relentless struggle for the liberation of Goa till 1961.

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[1] Lawande V. N. *Armed Resistance to Portuguese Rule* in *Goa's Freedom Struggle.*

[2] *Chronology of important events in Goa's Freedom Struggle.*

[3] *Chronology of important events in Goa's Freedom Struggle.*

[4] *Ibid.*

The negotiations between India and Portugal for the transfer of the Portuguese possession in India to the Indian Government failed and the Indian Mission in Portugal was withdrawn from 11th June, 1953. A Goa Action Committee was set up in Bombay in 1953 to bring together all Goan nationalist parties, including National Congress (Goa), Azad Gomantak Dal, People's Party etc. with a view to strengthening the freedom struggle. The second phase of satyagraha movement was started in August, 1954. In June, 1954, the Goa Liberation Council was established in Bombay, which brought out its fortnightly publication 'Goa Tribune' for giving wide publicity to the Goan freedom struggle. Besides, the following newspapers *Resurge Goa, Gomantak* (English), *Amacha Goa, Dipagraha, Pradip* and *Dudhasagar* also supported the freedom movement and helped in creating public opinion favourable for the liberation of Goa. Indian newspapers also gave wide publicity to the Goa Liberation Movement.

In 1954, an eminent surgeon of Mapusa was arrested for his protest against a statement by one of the speakers at the party that Goa was a part of Portugal. He and his Portuguese wife were deported to Portugal and had to stand trial later, before a military tribunal in Lisbon with the attempted subversion of the Portuguese regime in Goa. The incident touched off a series of protest meetings throughout the country. In a note of protest handed over to the Portuguese Legation in New Delhi on 15th March, 1954, the Government of India pointed out that "continuance of these repressive measures resulting in the arrest and deportation of Goans for professing pro-Indian sentiments is likely to have serious repercussions in India". On 18th June 1954, over 75 eminent Goans, advocates, doctors and professors were arrested by the Portuguese Government, as a security measure against the impending satyagraha of 15th August planned by the National Congress (Goa). In July 1954, manifesto was issued by the Goan residents of Bombay calling upon Goans at home and abroad to free themselves from the Portuguese rule and to unite with India. On 15th August, 1954, three batches of peaceful unarmed Goans, carrying the national flag of India entered Goa via Karwar, Tiracol and Banda. All the satyagrahis were arrested. The batch which entered Tiracol Fort was dealt with more severely as it had occupied the Tiracol Fort overnight by overpowering peacefully the Portuguese officials in charge of he Fort. To commemorate the valiant deed of the batch, the Congress decided to send fresh batch to Tiracol exactly one month after on 16th September 1954. A batch of eleven satyagrahis accordingly marched into Goa on that day and were arrested by the Portuguese. The mass satyagraha was organised inside Goa by villagers of Pernem, Parcem, Quepem, Zambaulim, Loliem and

Poinginim during August to November 1954, and the satyagrahis were arrested and imprisoned.[1]

Some young political workers from the National Congress (Goa) formed a new organisation called United Front of Goans in July 1954 and attacked the office of the Portuguese "Institute Indo-Portuguese". On the night of 21st July, 1954, the leaders of the United Front of Goans entered the village of Dadra near Daman (Surat district), and were welcomed by the local inhabitants who hoisted the national flag of India. They met with no resistance.

On 31st July, 1954, the volunteers of Azad Gomantak Dal along with some volunteers of Jana Sangh marched into Nagar Haveli and liberated Naroli. The volunteers of People's Party entered Nagar Haveli from its southern border, simultaneously and marched towards Silvassa, the Capital of Nagar Haveli. The volunteers of Azad Gomantak Dal liberated Silvassa on the 2nd August 1954, after capturing 155 Portuguese armed personnel and hoisted the Indian flag at Silvassa on 2nd August 1954. With the capture of Khandwel on 11th August by the volunteers of Azad Gomantak Dal, the liberation of Nagar Haveli was completed; administration of independent Dadra and Nagar Haveli was set up. Former Portuguese Administrator of Nagar Haveli surrendered after crossing Nagar Haveli borders into the Union of India along with 55 armed personnel.[2]

In a note presented to the Government of India by the Legation of Portugal at New Delhi on 24th July 1954, it demanded for the grant of necessary transit facilities to the Portuguese armed forces and authorities staying at Daman, to enable them to go to Dadra for the purpose of re-establishing the order which had been disrupted and to drive out the invader. In its reply to the Portuguese Legation dated 28th July 1954, the Government of India made it clear that they could not permit the movement of foreign troops and police on Indian soil and they certainly cannot be a party to the suppression of a genuine nationalist movement for freedom from foreign rule in any part of the Portuguese establishments in India.[3] On the 26th January 1955, the Government of India imposed economic blockade on Goa and the workers of the National Congress (Goa) organised a satyagraha at Castlerock, to stop the railway traffic to Goa.

The Azad Gomantak Dal again resumed its activities inside Goa in 1955, and its volunteers sacrificed their lives while attacking the

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[1] *Chronology of important events in Goa's Freedom Struggle;*
Case concerning right of Passage over Indian Territory, Vol. III, pp. 830-833.

[2] *Case concerning right of passage over Indian Territory, (Portugal V. India), The Hague*, Vol. I, pp. 100-103; Vol. III, pp. 795-801.

[3] Rubinoff Arthur G., *India's use of force in Goa*, p. 57.

Mapusa Police Station in an attempt at exploding Goa Radio Station and in a clash with the Portuguese soldiers at Pomburpa. One of their volunteers, while attacking Betim Police Station was severly wounded in October 1955. He was arrested and sentenced to 22 years of imprisonment and deported to Portugal. On the 14th April 1955, night curfew was declared at Cuncolim in Goa, following a bold attack by volunteers of Azad Gomantak Dal on the Cuncolim outposts. The curfew lasted for one month during which houses were searched and people arrested.[1]

The National Congress (Goa) held its session at Mapusa on 6th April 1955. A prominent woman worker was selected as its President. She was arrested along with other workers and sentenced for 9 years imprisonment. The arrest of the President of the National Congress (Goa), and also constant appeal of the National Congress (Goa) roused the Indian public opinion for all India Collective Satyagraha movement in Goa. *Goa Vimochana Sahayak Samiti* i.e. All Party Goa Liberation Committee was formed at Pune, on 14th May 1955, with a view to liberating Goa by participating directly in the Goan liberation movement. Accordingly the first batch of two prominent leaders of Indian Freedom Movement from Pune, marched into Goa on 18th May 1955. They were arrested and sentenced to imprisonment. Four more batches of Indian satyagrahis entered Goa till 24th June 1955 and all of them were arrested. The leader of the 6th batch of satyagrahis, while entering into Goa at Kiranpani was put to death by the the Portuguese police on 25th June 1955. On the 6th July, two more Indian satyagrahis were put to death while crossing the border at Patradevi village.

The office of the *Goa Vimochana Sahayak Samiti* was set up in Gayakwadiwada, Kesari office, Pune. A large number of volunteers from different states of India enrolled themselves with the Samiti for participating in the mass satyagraha to be offered at Goa, Daman and Diu on 15th August, 1955. Among them were some women volunteers also. About 4.000 satyagrahis, crossed the border at Banda, Tiracol and Castlerock with the Indian National Flag in their hands on 15th August, 1955. The Portuguese police and military opened fire on them at a number of places. 32 satyagrahis were reported to have died on the spot and 225 were injured.[2] The mass killing of unarmed satyagrahis caused deep resentment all over India. Angry demonstrations were held, schools, colleges and commercial establishments were closed everywhere. About 1,200 satyagrahis entered into

[1] *Chronology of important events in Goa's Freedom Struggle.*

[2] *Dudha Sagar* Marathi fortnightly Bombay, September 1, 1955; *Case concerning Right of passage over Indian Territory*, Vol. III, pp. 765-774.

Daman. The Portuguese Police opened fire, one volunteer was killed and three injured. The Indian satyagrahis were prepared to sacrifice more lives for the liberation of Goa, Daman and Diu, but the Government of India imposed a ban on their entry in Goa. On the 1st September, 1955. Consulate General of India in Goa was closed down and diplomatic relations between India and Portugal were severed and on 6th September, the Government of India declared that the liberation of Portuguese pockets in India was the responsibility of the Government of India.[1]

Portugal was admitted to United Nations Organisation on the 22nd December, 1955 and the same day filed a case against India in the International Court at the Hague claiming right of passage over Indian territory between Daman, Dadra and Nagar Haveli.

Consequent upon the Government of India's ban on the unarmed satyagrahis of Indian volunteers, the peaceful liberation movement in Goa organised by the National Congress (Goa), could not make further progress, even though occasionally satyagrahas were offered by some Goan volunteers. The underground freedom fighters intensified their armed liberation struggle. Azad Gomantak Dal was spearheading the movement. Now another organisation of Goa Liberation Army entered into the scene and further strengthened the armed struggle for the liberation of Goa.

The proceedings of the Right of Passage case filed against India by Portugal in the International Court of Justice at the Hague in 1955 continued till April, 1960. The International Court consisted of 15 Judges. Besides, the parties to the dispute had their own *ad-hoc* judge on the bench of the Court. The Hague Court totally rejected the claim of the Portuguese for the right of passage for milit ry personnel over Indian territory joining the Portuguese possession of Daman and Dadra and Nagar Haveli. The enclaves of Dadra and Nagar Haveli were formally incorporated in the Indian union in August, 1961.

Between 1954 and 1961, several hundred Goans were arrested, tortured, detained and sentenced for their participation in freedom struggle. The alien Portuguese administration continued to deterio rate. It was always the hope of the Indian Government that the Government of Portugal would come to take such a view as had already been taken by the Government of Great Britain and France when they decided upon to withdraw from India. It was the Government of India's desire to be patient, as long as the Portuguese

[1] New Leader XXXVIII No. 36 pp. 6-9; *Chronology of important events in Goa's Freedom Struggle.*

conduct made it possible. In November, 1961, the Goan Nationalist forces rallied under the banner of the Goan political convention, which formed part of the National Campaign Committee for the liberation of Goa, Daman and Diu set up at the third National Conference for Afro-Asian solidarity. Within a month *Operation Vijaya* was followed and Goa joined with the rest of Bharat on 19th December, 1961. The National Congress (Goa) was dissolved at its Mapusa Session in 1962 after the liberation of Goa.

SINCE LIBERATION

After liberation, the commander of the expeditionary force was appointed the Military Governor of Goa. The first Lieutenant Governor of Goa, Daman and Diu was sworn in on the 8th June, 1962. Indian Parliament passed the constitution 12th Amendment Act, 1962, by which Goa, Daman and Diu were integrated with the Indian Union from the day of Liberation and were included in the first schedule of the Constitution as Union Territories. Informal Consultative Council of 29 members was formed on 24th September, 1962.

In October, 1962, Panchayat elections were held in Goa, Daman and Diu. It was for the first time that the people of the territories were participating in the administration. In December, general elections for 30 assembly seats and two parliament seats were held. Maharashtrawadi Gomantak Party came out with success and the first popular Ministry was installed on 20th December, 1962.

From the 1st September, 1964, the Government of India's administrative control, was transferred from the Ministry of External Affairs to the Ministry of Home Affairs.

In the Opinion Poll, first to be held in the country in January, 1967, to ascertain the wishes of the people whether Goa should merge with Maharashtra State and Daman and Diu with Gujarat State or remain as Union Territory, the people of Goa, Daman and Diu decided to continue as an Union Territory.

Soon after the opinion poll, the general elections were held, the Maharashtrawadi Gomantak Party again came in power by majority and has continued in power till today.

* * *

CHAPTER 3—PEOPLE

POPULATION

The total population of the Union Territory of Goa, Daman and Diu, according to the census of 1971, is 8,57,771 including 4,31,214 males and 4,26,557 females. The population of the district of Goa as per the same Census is 7,95,120 comprising 4,01,362 males and 3,93,758 females and it accounts for 92·69 per cent of the total population of the territory.

The following table gives the taluka-wise distribution of population in Goa as per the Census of 1971.

TABLE No. 1—TALUKAWISE DISTRIBUTION OF POPULATION

District/ Taluka	Total/ Rural/ Urban	Area in Kms.	Total Population (including Institutional and houseless) Population		
			Total	Males	Females
1	2	3	4	5	6
GOA	.. T	3,701·0	7,95,120	4,01,362	3,93,758
DISTRICT	.. R	3,579·4	5,91,877	2,92,318	2,99,559
	U	121·6	2,93,243	1,09,044	94,199
Taluka	..				
Tiswadi	.. T	166·1	1,05,809	54,478	51,331
	R	129·1	46,551	23,530	23,021
	U	37·0	59,258	30,948	28,310
Bardez	.. T	265·6	1,24,103	59,659	64,444
	R	254·2	1,04,102	49,276	54,826
	U	11·4	20,001	10,383	9,618
Pernem	.. T	242·0	52,906	25,601	27,305
	R	239·5	49,976	24,184	25,792
	U	2·5	2,930	1,417	1,513
Bicholim	.. T	227·1	58,389	29,845	28,544
	R	214·9	49,839	25,528	24,311
	U	12·2	8,550	4,317	4,233
Satari	.. T	490·3	32,515	16,400	16,115
	R	480·9	29,593	14,897	14,696
	U	9·4	2,922	1,503	1,419

TABLE No. 1—contd.

District/Taluka	Total/ Rural/ Urban	Area in kms.	Total population (including Institutional and houseless) Population		
			Total	Males	Females
1	2	3	4	5	6
Ponda ..	T	283·2	84,590	43,411	41,189
	R	277·9	76,932	39,339	37,593
	U	5·3	7,668	4,072	3,596
Sanguem ..	T	886·6	44,588	23,338	21,250
	R	881·2	39,582	20,805	18,777
	U	5·4	5,006	2,533	2,473
Canacona ..	T	347·4	29,486	14,696	14,790
	R	345·6	28,151	14,027	14,124
	U	1·8	1,335	669	666
Quepem ..	T	347·3	41,547	21,130	20,417
	R	346 1	38,622	19,748	18,874
	U	1·2	2,925	1,382	1,543
Salcete ..	T	277·2	1,55,676	75,186	80,490
	R	253·5	1,07,083	49,798	57,285
	U	23 7	48,593	25,388	23,205
Mormugao .	T	78·3	65,511	37,618	27,893
	R	66·6	21,446	11,186	10,260
	U	11·7	44,065	26,432	17,633

In the district, the taluka of Salcete ranks first in respect of population with the taluka accounting for 1,55,676 i.e. 19·59 per cent. of the district population. The density of population in respect of this taluka comes to 561·60 per square kilometre. As against this, the taluka of Canacona has the least population mark of 29,486 i.e. 3·85 per cent and the density of population in this taluka is 84·88 per square kilometre.

Growth of Population

The total population of the district of Goa in 1800 excluding the New Conquest talukas was estimated at 1,78,478 including 91,436 males and 87,042 females.

As per the census taken in the year 1848, the total population of Goa was 3,55,402 consisting of 1,79,466 males and 1,75,936 females.

The following table gives the civil condition of the population, taluka-wise, as per the same Census :

TABLE No. 2.—TALUKAS-WISE CIVIL CONDITION OF THE POPULATION IN GOA DISTRICT

Sr. No.	Districts		Population: Sexes: Males	Sexes: Females	Married: Males	Married: Females	Widowers	Widows	Unmarried: Males	Unmarried: Females
1	2		3	4	5	6	7	8	9	10
1	Tiswadi		22,656	22,864	12,649	12,658	3,109	4,040	8,218	6,491
2, 3	Salcete, Anjidiva		48,644	50,599	17,939	17,944	5,350	8,156	25,355	24,499
4	Bardez		46,102	45,162	24,534	24,534	5,808	1,162	16,322	4,558
5	Tiracol		171	188	88	88	4	53	57	69
6	Ponda		14,646	12,969	10,387	10,392	327	938	3,922	1,649
7	Panch Mahal (Five Provinces)	Astagrar	1,879	1,928	937	939	102	247	840	742
8		Hemadbarce	3,657	3,475	2,438	2,439	114	442	1,105	638
9		Bali	2,040	2,087	1,520	1,534	105	244	405	309
10		Chandrawadi	3,255	2,535	2,799	2,301	236	222	950	569
11		Cacora	694	776	355	355	78	103	261	309
12	Canacona		6,627	6,274	4,868	4,874	182	753	1,582	642
13	Cabo de Rama		897	786	579	579	45	75	263	142
14	Bicholim		9,122	8,496	7,439	7,443	149	412	1,534	641
15	Sanquelim		4,853	3,715	3,124	3,129	174	267	1,555	329
16	Pernem		14,223	14,082	11,215	11,221	322	1,102	2,676	1,769

TABLE No. 2.—contd.

Sr. No.	Districts	Ages (in years) To a year old	From 1 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	From 70 upwards
1	2	11	12	13	14	15	16	17	18	19	20	21
1	Tiswadi	1,479	1,543	5,018	5,421	6,651	8,584	6,666	5,100	2,817	1,306	515
2	Salcete }	5,058	9,030	10,041	11,036	11,358	13,824	14,144	11,237	7,426	4,681	1,408
3	Anjidiva }											
4	Bardez	4,637	8,964	10,913	1,032	13,410	15,215	13,021	9,950	6,459	3,121	1,204
5	Tiracol	22	46	49	39	47	49	49	27	15	11	5
6	Ponda .. .	2,330	2,968	2,761	2,153	4,199	7,242	2,012	1,304	1,279	986	301
7	Panch Astagrar ..	332	339	418	487	757	701	381	292	102	21	17
8	Mahal Hemadbarce ..	648	557	601	702	982	1,074	1,006	1,142	317	112	15
9	(Five Bali ..	266	244	308	371	749	1,001	552	460	108	75	11
10	Provinces) Chandrawadi ..	540	816	1,070	1,347	157	1,722	732	643	219	114	9
11	Cacora	106	122	74	126	301	262	183	108	121	55	3
12	Canacona	1,282	1,254	1,241	1,285	2,161	2,674	1,231	1,320	164	228	61
13	Cabo de Rama	120	175	191	106	235	203	222	272	101	51	7
14	Bicholim	1,271	1,468	1,548	2,175	2,494	2,305	2,230	2,032	1,101	935	49
15	Sanquelim	849	1,235	769	1,069	1,203	1,161	1,172	755	226	110	21
16	Pernem	2,260	2,732	3,348	3,259	5,301	4,847	2,524	2,366	1,098	519	51

The Census for the year 1851 places the total population of the district at 3,63,788 inhabitants or a density of 342·54 to the square mile being an increase of 1,044 over that of 1848 when the aggregate was returned at 3,62,744 souls. By the enumeration of 1851, the population was classified under the following heads :—

(1) Sex—Males, 1,80,240 ; Females, 1,83,548

(2) Age—Males and females

from birth to 5 years of age	...	52,387
from 5 to 15	... ...	73,633
from 15 to 25	... ...	85,895
from 25 to 50	... ...	1,04,856
from 50 to 100	... ...	47,006
above 100	... ...	11

(3) Races :

(A) European : Males and females and their descendants	... ...	1.851
(B) Asiatic males and females	...	3,61,241
(C) African males and females and their descendants	... ...	696

(4) Social conditions :

Married males	...	81,522
Married females	...	81,682
Widowers	... ...	16,753
Widows	... ...	35,202
Unmarried males	...	81,965
Unmarried females	...	66,664

(5) Religion :

Christians	... ...	2,32,189
Hindus	... ...	1,28,824
Mohammedans	...	2,775

The first official attempt to hold the population Census of the territory was made in 1850 but the results could not be known.

The following table gives the population of Goa during the year 1877, as gathered through the statistics published from Boletim de Governo :

TABLE No. 3.- -POPULATION OF GOA IN 1877

District	Men					Women					Grand Total
	Under 14 years	Unmarried above 14 years	Married	Widowers	Total	Under 14 years	Unmarried above 14 years	Married	Widows	Total	
Velhas Conquistas											
Tiswadi ..	5,811	4,511	11,040	949	22,311	5,390	3,696	11,059	3,651	23,796	46,107
Bardez ..	14,165	9,086	23,242	3,068	49,561	12,849	4,978	23,541	10,898	52,266	1,01,827
Salcete ..	15,688	15,251	22,212	3,332	56,483	15,944	11,959	22,347	10,073	60,323	1,16,806
Novas Conquistas											
1st Division ..	4,504	1,360	6,505	409	12,778	3,639	306	6,402	2,038	12,385	25,163
2nd Division ..	4,428	3,228	7,626	1,026	16,308	3,294	1,774	7,923	2,279	15,270	31,578
3rd Division ..	4,229	3,197	9,974	1,093	18,493	2,856	1,068	9,535	2,435	15,894	34,387
4th Division ..	4,730	3,169	9,279	1,478	18,656	4,129	1,304	9,286	2,991	17,710	36,366
Total ..	53,555	39,802	89,878	11,355	1,94,590	48,101	25,085	90,093	34,365	1,97,644	3,92,234

The second attempt of a population census was made in 1878. However, the work was nullified for reasons as yet unknown.

The third attempt of a population census was made in 1880. As an anomaly was witnessed in the partial results during the course of its finalisation, a new census was ordered and was held on 17th February 1881. The Census of 1881 was followed by the census held in 1887, 1900, 1910, 1921, 1931, 1940, 1950, 1960 and then in 1971 on the all-India pattern after the liberation of the territory from the Portuguese. The following table gives the talukawise population of the district in 1881 :

TABLE No. 4.—TALUKAWISE POPULATION OF GOA DISTRICT IN 1881

District/Taluka	Residents	Number of house-holds	Popula-tion enumera-ted	De facto Popula-tion	Legal popula-tion
1	2	3	3	5	6
GOA DISTRICT ..	4,06,757	87,196	4,45,449	4,13,698	4,20,868
Tiswadi . ..	46,557	10,236	48,847	47,496	47,675
Salcete .. .	1,00,494	24,565	1,09,620	1,01,330	1,05,570
Bardez	96,001	24,486	1,09,951	97,246	97,407
Pernem	29,256	5,539	33,012	29,895	30,997
Sanquelim	41,849	3,731	45,179	42,790	43,829
Ponda	38,743	7,512	39,998	39,097	39,421
Sanguem	19,580	4,208	20,592	20,180	19,899
Quepem .. .	17,538	3,805	19,663	18,263	18,665
Canacona	16,656	3,080	18,490	17,314	17,312
Anjidiva Island	83	34	97	87	93

The following table gives variation in population during the 71 years from 1900 to 1971.

TABLE No. 5.—VARIATION IN POPULATION IN GOA DISTRICT

Year	Persons	Decade Variation	Percentage Decade Variation	Males	Females
1	2	3	4	5	6
1900 ..	4,75,513	....	....	2,27,393	2,48,120
1910 ..	4,86,752	+ 11,239	2.36	2,30,923	2,55,829
1921 ..	4,69,494	— 17,258	— 3.55	2,21,429	2,48,065
1931 ..	5,05,281	+ 35,787	+ 7.62	2,41,936	2,63,345
1940 ..	5,40,925	+ 35,644	+ 7.05	2,59,591	2,81,334
1950 ..	5,47,448	+ 6,523	+ 1.21	2,57,267	2,90,181
1960 ..	5,89,997	+ 42,549	+ 7.77	2,85,625	3,04,372
1971 ..	7,95,120	+ 2,05,123	+ 34.7	4,01,362	3,93,758

The population of the district of Goa has increased by 67·23 per cent during the course of 71 years (1900-1971) with a net variation of +3,19,607 in the population of 1900. The growth was not uniform during the 7 decades. An actual decrease in the population to the extent of 8·55 per cent was witnessed during the decade 1910-1921. A significant fact in respect of this growth of population has been that the growth during the period 1900-1960 was only 24·07 per cent, the actual growth being of 1,14,484 souls. As against this, the population spurt has been seen during the decade from 1960-1971 during which period the population of the district has increased by 2,05,133 as well as giving a percentage growth of 34·7 per cent.

The decade 1900-1910 recorded an increase of population of 11,239 giving a percentage of 2·36. The period 1910-1920 has actually shown a downward trend in respect of the population growth. The population having decreased from 4,86,752 in 1910 to 4,69,494 in 1921, the decrease was 3 55 per cent. However, it is interesting to note that the country as a whole also registered a decrease of about 0·30 per cent during this decade The fall is mainly due to famines, pestilence and epidemic diseases resulting in a very high mortality rate. The employment opportunities rated in the neighbouring provinces or abroad due to the outbreak of the 1st World War might have resulted in the immigration of population to a certain extent, from the district of Goa.

The decade 1920-1930 registered an increase of 35,787 or a rate of growth of 7·62 per cent. Expansion in port activities is reported to have attributed to the higher growth of population of about 23·05 per cent in Mormugao taluka alone. Besides, the sudden rise in population may be attributed to the normalising of employment situation in the neighbouring provinces which check immigration of the population.

In the decade 1920-1940, the population went up from 5,05,281 to 5,40,925, giving a percentage growth of 7·05.

As compared to the two previous decades, the growth of population in 1940-1950 was very low, the growth of the district of Goa being 1·21 per cent, giving an addition of only 6,523.

The decade 1950-60 saw an increase of population of 42,549 giving a percentage of 7·77. The increase in the population could mainly be attributed to the expansion of mining activities which attracted, to some extent, labour from the neighbouring provinces. This would be clear from the fact that the population of Sanguem, Bicholim, Satari and Quepem recorded an increase of about 44·69, 26·95, 27·41 and 17·05 per cent respectively. The Mormugao taluka also witnessed an increase of population by 28·87 per cent due to the exploitation of mines and the consequent expansion of port activities.

The population spurt during 1960-1971 giving as high a percentage growth as 34·7 can mainly be attributed to two important factors which appear to have been attributed to this phenomena. One is the reversion in the trend of immigration of Goan population to Bombay and other parts of the country and of other countries especially the African and South European countries. The expansion in the economic and employment potentialities, consequent upon the opening of a large number of educational institutions and the corresponding increase in secondary and tertiary sectors of economy resulted in immigration of population especially that of unskilled labour. However, the main reason in this spurt may be the confidence that the patriotic Goan population got that Liberation made them devoid of Portuguese repurcussions.

Density of Population

The density of population is a gauge to measure the pressure of population on a kilometre of land, indicating human concentration. The following statement gives the trend in the density of population of the district of Goa in comparison to the one that is found in the entire territory from 1900 to 1971.

Year	Union Territory of Goa, Daman and Diu	District of Goa
1900	137	132
1910	140	135
1920	135	130
1930	146	140
1940	157	150
1950	161	152
1960	169	163
1971	225	215

The average density of population for the territory as also for the district of Goa is almost identical as compared to the districts of Daman and Diu. Density of population in the district of Goa is even less than 50 per cent than it appears to be in these two districts. The density of population in the district of Goa has increased from 132 per square kilometre in 1900 to 215 per square kilometre in 1971. This represents an increase of 62·88 per cent in the density population in 1971 over 1900. The population in the district is not evenly spread and variation in the density within this district is wide. It is as low as 50 persons per square kilometre in Sanguem taluka and as high as 835 persons per square kilometre in Mormugao taluka.

The following statement gives the talukawise density of rural and urban population of the district as per the Census of 1971.

District/Taluka	Total	Rural	Urban
1	2	3	4
Goa District	214·84	165·36	167·14
Taluka—			
Tiswadi	637.02	360.58	1,601.57
Bardez .. .	467.26	409.52	1,748.34
Pernem	218.66	208·67	117.20
Bicholim	257.10	231.91	700.81
Satari	66.31	61.53	31.08
Ponda	298.69	276.83	144.49
Sanguem .. .	50.28	44.90	92.70
Canacona	84·91	81.45	74.16

Urban Population

The total urban population of the district of Goa as per the Census of 1971 is 2,03,243 giving a percentage of 89·62 to the total population of the territory. The urban population measures slightly more than 25·56 per cent of the total district population, urban and rural, taken together.

The urban population in the district was distributed over to urban agglomerations of Panaji under Class II of the classification[1] with population between 50,000 and 99,999 and Margao under Class III of the classification with population between 20,000 and 49,999 and the towns of Mormugao and Mapusa under Class III, Bicholim, Ponda and Sanguem in Class V and Pernem, Quepem and Valpoi under Class VI.

The following table gives population of urban agglomerations and towns in the district of Goa as per the Census of 1971 :

[1] There are in all, six classes in which all urban agglomeration/towns are grouped as shown hereunder :

Classes of urban agglomeration/towns—

I	1,00,000 and above	IV	10,000 to 19,999
II	50,000 to 99,999	V	5,000 to 9,999
III	20,000 to 49,999	VI	less than 5,000

TABLE No. 6.—POPULATION CF URBAN AGGLOMERATION/TOWNS IN THE DISTRICT OF GOA

Total of each size class/Urban agglomeration/Towns	Population 1971			Proportion of population in each size class to total Urban population		Growth Rate		Sex Ratio
	Persons	Males	Females	1960	1971	1950-60	1960-71	1971
1	2	3	4	5	6	7	8	9
All classes (No. of towns 11)	2,03,243	1,09,044	94,199	100.00	100.00	+12.59	+90.00	934
Total Class II (50,000 to 99,999) (No. of town 1).	59,258	30,948	28,310	40.70	29.17	....	+36.10	914
Panaji Urban agglomeration.	59,258	30,948	28,310	40.70	29.17	....	+36.10	914
Total Class III (20,000 to 49,999) (No. of towns 3).	1,12,659	62,203	50,456	38.80	55.43	+11.01	+170.72	811
Margao Urban agglomeration.	48,593	25,388	23,205	....	23.91	—10.54	+80.42	914
Mormugao Urban agglomeration.	44,065	26,432	17,633	....	21.68	+32.66	+579.70	670
Mapusa Urban agglomeration.	20,001	10,383	9,618	....	9.84	—43.64	+143.97	926
Total Class V (5,000 to 9,999) (No. of towns 3).	21,214	10,922	10,292	9.75	10.43	+521.67	+118.97	942
Bicholim ..	8,550	4,317	4,233	...	4.21	...	+115.41	980
Ponda ..	7,658	4,072	3,586	....	3.76	+38.12	+133.54	880
Sanguem ..	5,006	2,533	2,473	....	2.46	..	+105.01	976
Total Class VI (Less than 5,000) (No. of towns 4).	10,112	4,971	5,141	11.29	4.97	+139.80	—166.22	1,034
Pernem ..	2,930	1,417	1,513	..	1.45	....	+46.94	1,068
Quepem ..	2,925	1,382	1,543	....	1.44	....	+156.12	1,116
Valpoi ..	2,922	1,503	1,419	....	1.43	....	—65.79	944
Chauri ..	1,335	669	666	....	0.65	....	+196.66	996

In 1900 there was only one town in the district of Goa. The number rose to eleven as per the Census of 1960.

The following statement gives the number of towns enumerated during the Census from 1900 to 1971 :

Year	Number of towns
1900	1
1910	1
1921	2
1931	2
1940	4
1950	5
1960	11
1971	11

Besides towns there were villas which can be defined as lesser developed region than a town but more developed than a village. In the district of Goa there were two villas as per the Census of 1881. The number rose to six as per the Census of 1950. As per the Census of 1971, Bicholim, Chauri, Mapusa, Margao urban agglomeration comprising Aquem, Margao Municipal Council and Navelim ; Mormugao, Panaji urban agglomeration consisting of Calapur, Chimbel, Cujira, Morambi o Grande (Merces), Morambi o Pequeno (Merces), Murda, Panaji Municipal Council, Panelim and Talegao ; Pernem, Ponda, Sanguem, and Valpoi have been declared as towns. Panaji was considered as a town right from the Census of 1900, Mormugao from 1921 and Margao and Mapusa from 1940.

Of the urban population of the district, Panaji urban agglomeration ranks first with a population of 59,258 inclusive of 30,948 males and 28,310 females and accounts for 29·15 per cent of the total urban population of the district. It is followed by Margao urban agglomeration with a population of 48,593 including 25,388 males and 23,205 females giving a percentage of 23·91 to the total urban population of the district. These urban agglomerations of Panaji and Margao are followed by the towns of Mormugao, population—44,065 (26,432 males, 17,633 females) ; Mapusa, population—20,001 (10,383 males and 9,618 females) ; Bicholim, population—8,550 (4,317 males and 4,233 females) ; Ponda, population—7,658 (4,072 males and 3,586 females) ; Sanguem, population—5,006 (2,533 males, 2,473 females) ; Pernem, population—2,930 (1,417 males, 1,513 females) ; Quepem, population—2,925 (1,382 males, 1,543 females) ; Valpoi, population—2,922 (1,503 males, 1,419 females) ; and Chauri, population—1,335 (669 males, 666 females).

These towns account for a percentage of 21·68, 9·84, 4·21, 3·77, 2·46, 1·44, 1·44, 1·44 and 0·66 respectively of the total urban population of the district.

The following table gives the rural and urban position of the population, taluka-wise, in the district of Goa as per the Census of 1971 :

TABLE No. 7.—POPULATION IN RURAL AND URBAN AREAS OF GOA DISTRICT

District/Taluka	Population 1971			Percentage of Urban to total population
	Total	Rural	Urban	
1	2	3	4	5
GOA DISTRICT ..	7,95,120	5,91,877	2,03,243	25·56
Taluka				
Tiswadi	1,05,809	46,551	59,258	56·00
Salcete ..	1,55,676	1,07,083	48,593	31·21
Bardez	1,24,103	1,04,102	20,001	16·12
Mormugao ..	65,511	21,446	44,065	67·26
Ponda	84,590	76,932	7,658	9·05
Bicholim ..	58,389	49,839	8,550	14·64
Pernem	52,906	49,976	2,930	5·54
Quepem	41,547	38,622	2,925	7·04
Sanguem ..	44,588	39,582	5,006	11·23
Canacona	29,486	28,151	1,335	4·53
Satari ..	32,515	29,593	2,922	8·99

Rural Population

As per the Census of 1971, there were in the district, 383 inhabited villages with a total rural population of 5,91,877. The table already referred to earlier, gives information regarding taluka-wise rural population of the district. Of the total rural population of the territory, 93·80 per cent is found in the district of Goa. The percentage distribution of rural population to the total population of the district as per the Census of 1960 and 1971 were 85·20 and 74·59 respectively.

The rural population of the district which was 5,02,668 as per the Census of 1960 rose to 5,91,877 showing an increase of 89,209 giving a percentage increase of 17·75 per cent. The following statement gives the number of villages in the district of Goa as per the Census from 1881 to 1971.

TABLE No. 8.—PROGRESS IN NUMBER OF VILLAGES* IN GOA DISTRICT

District/Taluka	1881	1900	1910	1921	1931	1940	1950	1960
1	2	3	4	5	6	7	8	9
Goa District ..	100	102	102	165	166	166	251	251
Taluka								
Tiswadi ..	28	27	27	18	18	18	26	26
Salcete	20	31	31	24	24	24	43	43
Mormugao .				5	5	5	12	12
Bardez .	27	27	27	26	26	26	42	42
Pernem	13	3	3	21	21	21	23	23
Bicholim	4	2	2	18	18	18	25	25
Satari		1	1	6	6	6	8	8
Ponda ..	3	3	3	17	17	17	29	29
Sanguem .	1	1	1	10	10	10	10	10
Quepem .	2	2	2	14	15	15	25	25
Canacona	2	4	4	6	6	6	8	8
Anjidiva Island .	1	1	1					

* The villages that form part of urban areas and those inhabited are included in this statement.

It will be interesting to note here that there are 131 villages with a population of less than 500 and there are 97 villages with a population of 2,000 and above. The following statement gives the distribution of villages according to size in the district of Goa.

Size of population	Number of villages
Less than 500	131
500 to 999	76
1,000 to 1,499	38
1,500 to 1,999	41
2,000 and above	97

It must be noted here that besides 383 inhabited villages, there are 8 uninhabited villages in the district. Of these 3 villages, namely Zarmem, Pendral and Ansolem are located in the Satari taluka and 5 villages, namely Moissal, Doma, Oxel, Dongurli and Sigonem are located in the Sanguem taluka.

Only 7 of the 383 villages in the district are located at a distance of between 26 and 50 kilometres from the nearest town. The following statement gives the distribution of villages according to their distance from the nearest town :

Distance from the nearest town in km.	Number of Villages
0-5	82
6-10	118
11-15	114
16-25	62
26-50	7

LANGUAGE

The people of Goa mostly speak Konkani which is the language of the Union Territory of Goa. However, a few of them speak English and Portuguese. Although Konkani as a language has not yet been specified in the 8th Schedule of the Constitution, the majority of the population of Goa speak Konkani. All the Hindus and the majority of the Christians in Goa use the Konkani dialect with a mixture of Portuguese words. Since the liberation of the Territory, English words are gradually taking the place of Portuguese words. Some Catholic families still speak Portuguese, but they are hardly about 3 per cent. Though Konkani is the spoken language of the Hindus of Goa, the majority of them make use of Marathi language for correspondence, etc. The medium of instruction is also Marathi as is seen in the other parts of the Konkan. The Government have opened Konkani schools in Goa, but the number of students studying in these schools is negligible. The Christian students prefer to go to English schools, while some of them in rural areas choose to go to Marathi schools. The Christians make use of the Roman script even while corresponding in Konkani.[1]

" Konkani may be looked upon as an older offshoot of Proto-Marathi, but it has some independent grammatical characteristics. It is split into a number of dialects. In Goa among the local Christians, the Roman Catholic Missionaries have built up a literature which is of Christian inspiration. This is written and printed in the Roman character in a Portuguesee Orthography."[2]

Konkani has now been recognised as an independent modern literary language by the Sahitya Academy, though it has not yet been specified in the Eight Schedule of the Constitution.[3]

The district-wise break-up of the mother-tongue of the district of Goa, Daman and Diu as per the Census of 1971 is not available. The statement giving the data regarding the mother-tongue, as specified in the 8th Schedule of the Constitution for the Union Territory as a whole as per the Census of 1971 is given under Appendix, 5.

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[1] Desai S. S. States of Our Union, Goa, Daman and Diu, Dadra and Nagar Havel Publication Division, Government of India, 1976, p. 7.

[2] *Gazetteer of India, Country and people*, Volume I, reprinted in 1973, pp. 401-402.

[3] An extract of the resolution obtained from the Sahitya Academy, New Delhi, is reproduced below :—

"As Konkani fulfils the criteria formulated by the Academy for recognition of a language, it is recognised as an independent modern literary language of India."

RELIGION AND CASTE

"Hinduism of today is not a Vedic religion ; nor is it the Pauranik ; nor is it the philosophical pantheism of the highly educated *brahman.* It is a vast mixture in which the Vedic Workship of the great forces of nature, the Pauranik Avataras (incarnations), the philosophical doctrine of Karma and be it noted the pre-Aryan reverence of trees, stone, animals and tribal totems are inextricably intermingled."[1]

The religious life of the Hindus is mainly governed by the caste prejudices and the tradition of the caste groups to which one belongs. In the district of Goa, there are a number of castes and sub-castes. The chief castes found in the district are Gauda Saraswat Brahmins, *Karhada* Brahmins and two sub-castes among Karhada Brahmins known as Padye Brahmins and Bhatta Prabhu Brahmins besides a few Chittapavan Brahmins and *Daivajnya* Brahmins popularly known as Sonars. Besides Brahmins, the other castes found are Vaishya, Maratha, Bhandari, Gomantak Marathas, Kharvi, Gaudas, etc.

All the persons belonging to the Brahmin castes were originally dwellers of the east coast. The Saraswats claim to have come from Bengal and place their origin to the region of Saraswati.[2] The Goan Saraswats follow *Rigveda* and its *ashvalayana sutra.* The Saraswats have amongst them, sections which are either *smartas* or *shaivas* and *madhavas* or *vaishnavas.* These sections have different family deities and different religious heads. The headquarters of the religious head of the Smartas is known as *Kaivalyapur matha* and is located at Queula while the headquarters of the *vaishnavas* is located at Partagal. About fifty years before, marriages between these two sections were prohibited. However, during the last fifty years, marriages between these two sections do take place as a result of deliberations at the unification conference of *smartas* and *vaishnavas* held at Mapusa in 1911.

The Dravida Brahmins in the district follow the religious leadership of the Swami Adya Shankaracharya at Shringeri Peeth in Karnataka State. Most of the non-Brahmin classes in Goa also are their followers. The family deities in respect of most of the Daivajnya brahmins are either Kalika at Cansarpale or Shantadurga at Marcela. Cansarpale is the chosen deity of a number of *daivajnya* brahmin families.

Polytheism

The Hindu deities can be classified into five categories such as *Grama devatas* (village deities), *Kula devatas* (family deities), *Ishta*

[1] Sedgwick L. J., Census of India, 1921, vol. VIII, p. 63.

[2] Karve I, *Maharashtra land and its People.*

devatas (chosen deities), *Vastu devatas* or *Gruha devatas* (house deities established at *Vastu* house-warming-ceremony). In the district of Goa it is particularly observed that *Smartas* have no taboo in visiting the temples of *Vaishnavas* while at the temple of Ramnath (particularly of *Vaishnavas*) a mask of *Vaishnavas* is placed over the *shiva linga*. Nagesh, though a *shiva linga*, is a family deity of *smartas* as well as *vaishnavas*. The worshippers of the Ganapati temple at Candolim are mostly *smartas* and *vaishnavas*. It is a family diety also of a number of *smarta* and *vaishnava* families.

The management of the *gram devatas* is vested in the village populace while the management of the *kula devatas* is vested in the representatives of the families whose family deity that particular deity is. *Gram devatas* are considered the protectors of the particular village. The principal *gram devatas* are Santer, Bhumika, Vettal, Mauli, Rohin, Bhagawati, Durga and Rawalnath.

Kula devatas are sacred to particular families and these deities become the object of special ceremonies (*kuladharma*) observed by the family. The family deities particularly, of the people, are Mahalaxmi, Mangesh or Mangirisha, Mhalsa, Naguesh, Ramnath, Shanta Durga, Devaki Krishna and Sapta Koteshwar, etc.

Besides family deities and village deities, some other deities are worshipped traditionally in Goa. The worship of Vitthal in Goa is an old tradition of more than five hundred years. In this respect, mention may be made of the temple dedicated to Vitthal at Sanquelim.

Religious Distribution

'Religion is an important and perhaps a basic cultural characteristic of the population. In a secular state like India, several religions have thrived and every decennial Census provides an interesting picture of the religious persuasions of the people'. In what follows, is discussed in brief the religious distribution of the population of the district as per the Census of 1971.

Of the total population of the district of Goa of 7,95,120 (4,01,362 males and 3,93,758 females) as many as 4,96,389 (2,59,173 males, 2,37,216 females) have been returned as Hindus; 2,70,126 (1,26,058 males and 1,44,068 females) as Christians; and 26,480 (14,533 males and 11,947 females) as Muslims. In other words it can be stated that as many as 62·43 per cent of the population are Hindus, 33·97 are Christians, 3·33 per cent are Muslims and the remaining 0·27 per cent are Sikhs, Buddhists, Jains and others. The following table gives the religion-wise break-up of the population of the district as per the Census of 1971 :

TABLE No. 9—POPULATION BREAK-UP, RELIGION WISE, FOR THE DISTRICT OF GOA.

Religion		Total	Rural	Urban
Total Population	Total	7,95,120	5,91,877	2,03,243
	Males	4,01,362	2,92,318	1,09,044
	Females	3,93,758	2,99,559	94,199
Hindus	Males	2,59,173	1,92,824	66,349
	Females	2,37,216	1,83,808	53,408
Muslims	Males	14,533	5,121	9,412
	Females	11,947	4,319	7,628
Christians	Males	1,26,058	93,752	32,306
	Females	1,44,068	1,11,242	32,826
Sikhs	Males	681	345	336
	Females	180	36	144
Buddhists	Males	211	50	161
	Females	49	37	12
Jains	Males	199	59	140
	Females	134	40	94
Other Religions and persuassions				
	Males	108	53	55
	Females	46	29	17
Religion not stated				
	Males	399	114	285
	Females	118	48	70

It will be seen from the table that Hindus and Christians form the main section of the population in the district. As is the trend witnessed in the rest of the country, Hindus, with 62·43 per cent form the major section of the population of the district. Goa ranks 49th amongst the districts in which the Hindu population is placed between 50·01 to 77·99 per cent of the total population. The percentage decadal growth rate during 1960-71 for the Hindus came to 40·41 in the district. It may be mentioned here that Christians form the third major religious community in the order of enumerical strength of the population for the country. The district ranks third in respect of Christian population for the entire country. The district of Goa ranks fifth in respect of the percentage of Christian population in the country. The growth rate of Christian population of the district was less than that of the general population between 1960-71. The

following table gives the growth rate and proportion of population of each major religious community as per the Census of 1971 :

TABLE No. 10.—THE GROWTH RATE AND PROPORTION OF POPULATION OF EACH RELIGIOUS COMMUNITY, FOR THE DISTRICT OF GOA

Religious/Community	Percentage Decadal growth rate 1960-71	Percentage of each religious community to total population 1971
Total population	34·77	....
Hindus	40·41	62·43
Muslims	130·06	3·33
Christians	20·26	33·97
Sikhs	....	0·11
Buddhists	37·57	0·03
Jains	732·50	0·04
Religion not stated	...	0·07
Others	60·42	0·02

SCHEDULED CASTS AND SCHEDULED TRIBES

Of the total population of 7,95,120 of the district of Goa, as many as 14,193 have been enumerated as belonging to the Scheduled Castes and 439 as belonging to the Scheduled Tribes, as per the Census of 1971. This gives the percentage of 1·79 and 0·06 of Scheduled Castes and Scheduled Tribes respectively, to the total district population. To the Scheduled Castes population of 14,193, as many as 9,168 representing 64·59 per cent, inhabit the rural areas, and 5,025 representing 35·41 per cent inhabit the urban areas. Of the Scheduled Tribes population of 439, as many as 178 representing 40·54 per cent are found in rural areas and 261, giving a percentage of 59·46, stay in urban areas.

The following table gives the population regarding Scheduled Castes and Scheduled Tribes, taluka-wise, classified as urban and rural, as per the Census of 1971. The principal scheduled castes found in the district are *Bhangi* and *Chambar*. Besides these, there are *Mahars*, *Mahyavanshivas vankar* and *Mang*.

TABLE No. 11.—POPULATION OF SCHEDULED CASTES AND SCHEDULED TRIBES IN GOA DISTRICT

Taluka		Population 1971 Census		
		Total population (i.e. General population)	Scheduled Caste population	Scheduled Tribe population
1		2	3	4
Tiswadi	Total	1,05,809	1,222	114
	Rural	46,551	268	5
	Urban	59,258	954	109
Bardez	Total	1,24,103	3,065	40
	Rural	1,04,102	2,146	22
	Urban	20,001	919	18
Pernem	Total	52,906	2,216	....
	Rural	49,976	2,021	..
	Urban	2,930	195	...
Satari	Total	32,515	799	....
	Rural	29,593	726	....
	Urban	2,922	73	....
Bicholim	Total	58,389	1,461	14
	Rural	49,839	1,249	14
	Urban	8,550	212	...
Ponda	Total	84,590	841	5
	Rural	76,932	737	1
	Urban	7,658	104	4
Sanguem	Total	44,588	780	60
	Rural	39,582	739	57
	Urban	5,006	41	3
Canacona	Total	29,486	179	....
	Rural	28,151	164	....
	Urban	1,335	15	....
Quepem	Total	41,547	360	4
	Rural	38,622	313	4
	Urban	2,925	47	....
Salcete	Total	1,55,676	1,917	64
	Rural	1,07,083	690	24
	Urban	48,593	1,227	40
Mormugao	Total	65,511	1,353	138
	Rural	21,446	115	51
	Urban	44,065	1,238	87

HINDUS*

Of the total population of the district of Goa as many as 4,96,389 are Hindus. It gives a percentage of 62·42 to the total population of the district. As in other parts of the country, Hindus in Goa are divided into castes and sub-castes. Though the customs differ slightly from each other, they are in general common in respect of all the Hindus. Most of the Goa Hindus are theists and are very particular in the observance of family customs and religious traditions. Most of the Hindu customs are born out of a feeling of religiosity and they continue right from the birth to the after death rites. The life of a Hindu is a round of customary rituals and ceremonies known as *samskaras* (sacraments). In respect of the exact number of these *samskaras*, divergent views are expressed among the *smriti* writers.[1] According to some sources, these *samskaras* are divided into two categories namely, *nitya* (usual)—which must be performed—and they number sixteen, and *naimittika* (special performance of which is left to the individual)—and they number twenty-four.

The chief of the customary rituals are those at birth, thread-girding, marriage, pregnancy and death. The *samskaras* of *garbhadhana* (girl-wives attaining puberty) ceremony used to be performed separately with great pomp when girls were married at an early age. Now it has become a part of the marriage rite and is given scant attention.

Birth

When the first signs of pregnancy are noticed, it is a moment of great joy for the newly wed bride as bearing a child ripens her woman-hood and as such the coming of a baby is greeted with pleasure and happiness. It is considered a privilege of the young wife to go to her parents, house for her first confinement and all the expenditure for the first confinement is also borne by her parents. During the 5th, 7th and 9th month of her confinement, the young wife is adorned with bangles and her hair is decked with flowers in the presence of other married women, widows excluded. Sweet balls (ladoos) are distributed to those present. The desires and longings of the expectant mother are always attempted to be satisfied by the members of the family. In urban areas, the deliveries take place in the maternity hospitals while in rural areas they usually take place at the residence of the expectant mother, assistance for the safe delivery being provided by a village midwife known as *suin*.

The expectant mother repairs to an inner chamber of the house at the inception of labour pains. She is taken care of by the midwife from then onwards for ten days or more. The delivery usually takes place

* This section has been contributed by Shri B. D. Satoskar, Caranzalem, Goa.

[1] Ancient Indian Law givers such as Manu, Gautama, Yajnyavalkya, etc.

on the floor, no cot being used. The position of the mother remains unaltered for some time after the delivery. Immediately on the birth of a child, cold water is sprinkled over it to 'awaken' it. The child's umbilical cord is tied with cotton thread a few inches away from the navel and is severed with a knife. The wound is touched with ashes. After all this is done, the midwife lays the child on a *supa* (winnowing fan). The midwife then rubs the mother and the child with turmeric and oil. The mother and the child are bathed in hot water and after the child is swathed in cloth bandages, mother and child rest on a cot under which a small fire of live coals is set. During the first three days the mother is fed on a saltless vegetarian diet. On the fourth day the mother and child undergo a special bath and then the mother starts suckling the child, herself taking a full nutrituous diet.

The first ritual in the infant's life comes on the night of the sixth day. This ceremony is known as *sathi* (Mother Sixth). No person from the family sleeps at night and a *ghumat* (a drum-like musical instrument) is beaten throughout the night. A feast is given to the entire village populace. This ceremony not being a *vedic samskara*, offerings made during the ceremony, differ according to region, community and family, but the ceremony is performed as the sixth night is considered to be full of danger for the new born and the only way to save the child from convulsive seizures is considered to be by worshipping Mother Sixth and is gone through with a view to keeping away evil spirits lurking in the lying-in room to attack the child. It is also performed as it is a superstitious belief that the Goddess of Fate comes to the child and writes its fate on the child's forehead on that particular day.

The Mother is considered impure for ten days after the delivery and is not touched by anybody except the midwife. During this period, *suher* (ceremonial impurity) is observed by the family. The number of days for which *suher* is observed varies from caste to caste and it ranges from three days in general to ten days. Ceremonies such as thread-girding and marriages as also death anniversary rites (*shraddha*), are not performed during this period. The mother and the child are bathed on the eleventh day and cow's urine is sprinkled in the house to purify the house.

The Naming

The *barse* or naming ceremony of the child takes place on the twelfth day if a girl and on the thirteenth day if a boy. The *karna-vedha* (piercing of the ear-lobes) ceremony usually takes place on the morning of the naming ceremony day. However, nowadays, this ceremony does not take place in respect of boys in a number of cases,

while in respect of girls, it sometimes takes place at a later stage. The naming ceremony proper usually takes place in the evening with women neighbours, friends and kinsmen assembled, when the child is ceremoniously cradled and the mother of the child whispers its name in its ear. The function closes with the distribution of boiled grams and packets of sweetmeats to all assembled. In a number of cases the horoscopes of the child is also prepared on the same day.

After a child gets its complete set of milk teeth, the child is given the taste of food for the first time and the ceremony is known as *Anna grahana* (*Ushtavana*) ceremony. However, this system is not prevalent at present.

Chaula

The ritual to follow naming in respect of a newborn is that of Chaula, that is, hair cutting ceremony, which is also known as *cuda-karana*. Especially in certain sections of the community, they pay special attention to the first shaving of the child (*javal*). It is based on the belief that the hair with which the child is born is impure. This system is also on its way out. However, amongst brahmins, the rite is usually gone through at the time of the thread-girding ceremony.

Thread-girding

Upanayana, *Vrata-bandha* or *mounji-bandhan* are the Sanskrit names for the ceremony. In popular parlance, all these names have given way to a short and easy word, *munja*. It is a *samskara* prescribed for the Hindus belonging to the first three varnas i.e. caste groups namely, Brahmins, Kshatriyas and Vaishyas. Besides Dravid brahmins—Kramavanta, Karhada, Chitpavans, etc, in Goa, the ceremony is performed amongst the Saraswat Brahmins, Vaishyas and Daivajnya brahmins. Thread-girding is a purificatory rite when a boy is initiated into the *brahmacharyashrama* or studenthood. After the ceremony, the boy was expected to leave his house and to be at the feet of his *Guru* for at least about twelve years. After his return from his *Guru's* abode, the boy went through the *samavartana* (return) ceremony, popularly known as *sod munja*. However, the significance of the *samskara* has been lost and what has now remained is only the ceremonial aspect and as such, the *samavartana* or the *sod munja* also follows the thread-girding ceremony without much lapse of time.

Mounjibandhana means girding the waist of the boy with a thread made from munga grass and is done with due Vedic rites by priests. Having lost its religious significance, the ceremony has become a festive occasion for a gathering of family and friends, and many a time it is not performed at the proper age but is undergone before marriage.

In order to convey an idea of the rites of *upanayana* in the days of the *grihya sutras* the ceremony as contained in the *Asvalayana grihya sutra* (which is among the shortest) is set out here in full : "Let him initiate the boy who is decked, whose hair (on the head) is shaved (and arranged) who wears a new garment or an antelope skin if a *brahman*, fur skin if a *kshatriya*, goat's skin if a *vaishya*; if they put on garments they should put on dyed ones, reddish yellow, red and yellow (for a *brahman, kshatriya, vaishya* respectively) they should have girdles and staffs (as described above). While the boy takes hold of (the hand of) his teacher, the latter offers (a *homa* of clarified butter oblations) in the fire (as described above) and seats himself to the north of the fire with his face turned to the east, while the other one (the boy) stations himself in front (of the teacher) with his face turned to the west. The teacher then fills the folded hands of both himself and of the boy with water and with the verse 'we choose that of Savitr' (Rg. V. 82.I) the teacher drops down the water in his own folded hands on to the water in the folded hands of the boy; having thus poured the water, he should seize with his own hand the boy's hand together with the thumb (of the boy) with the formula 'by the urge (or order) of the god Savitr, with the arms of the two Asvins, with the hands of Pusan, I seize thy hand, oh so and so; with the words 'Savitr has seized thy hand, oh so and so' a second time (the teacher seizes the boy's hand); with the words 'Agni is thy teacher oh so and so' a third time. The teacher should cause (the boy) to look at the sun, while the teacher repeats 'God Savitr', this is they bramachari, protect him, may he not die' and (the teacher should further) say 'Whose *brahmachari* art thou ? Thou art the *brahmachari* of Prana. Who does initiate thee and whom (does he initiate ?) I give thee to Ka (to Prajapati). With the half verse (Rg. III 8·4) 'the young man, well attired and dressed, came hither' (the teacher) should cause him to turn around to the right and with his two hands placed over (the boy's) shoulders he should touch the place of the boy's heart repeating the latter half (of Rg. III 8·4). Having wiped the ground round the fire the *brahmachari* should put (on the fire) a fuel stick silently, since it is known (from *sruti*) 'what belongs to Prajapati is silently done', and the *brahmachari* belongs to Prajapati. Some do this (offering of a fuel stick) with a *mantra* 'to Agni I have brought a fuel stick, to the great Jatavedas; by the fuel stick mayst thou increase, Oh; Agni and may we (increase) through Brahman (prayer or spiritual lore), *svaha*'. Having put the fuel stick (on the fire) and having touched the fire, he (the student) thrice wipes off his face with the words 'I anoint myself with lustre'. May Agni bestow on me, insight, offspring and lustre; on me may Indra bestow insight, offspring and vigour (*indriya*). on me may the sun bestow insight, offspring and radiance;

what thy lustre is, Oh Agni, may I thereby become strong; what thy consuming power is, Oh Agni, may I thereby acquire consuming power. Having waited upon (worshipped) Agni with these formulas, (the student) should bend his knees, embrace (the teacher's feet) and say to him 'recite, Sir, Recite, Sir the Savitri'. Seizing the student's hands with the upper garment (of the student) and his own hands the teacher recites the Savitri, first *pada* by *pada*, then hemistich by hemistich (and lastly) the whole verse. He (the teacher) should make him (the student) recite (the Savitri) as much as he is able. On the place of the student's heart the teacher lays his hand with the fingers upturned: may Brahaspati appoint thee unto me'. Having tied the girdle round him (the boy) and having given him the staff, the teacher should instruct him in the observances of a *brahmachari* with the words 'a *brahmachari* art thou, sip water, do service, do not sleep by day, depending (completely) on the teacher learn the Veda. He (the student) should beg (food) in the evening and the morning; he should put a fuel stick (on fire) in the evening and morning. That (which he has received by begging) he should announce to the teacher; he should not sit down (but should be standing) the rest of the day' ".[1]

Funeral Ceremonies

After-death rites amongst Hindus irrespective of caste are almost the same. Hindus as a rule cremate their dead, with the exception of children under eight years of age who are buried. Generally, a space is reserved in a village or town for a crematorium and the dead belonging to all castes are cremated in the same crematorium. When the life of a person is extinct, the news is immediately conveyed to the friends and relatives of the deceased and in the case of the nearest kith and kin of the deceased being out of station, it is customary to postpone the cremation for even twenty four hours.

When the relatives and friends of the deceased arrive, preparations for taking the dead body to the cremation ground commence. Two new earthern pots, a large one for water and a small one for fire, *gulal*, betel leaves and white cloth five to seven feet in length are procured. Arrangements are made for sufficient firewood, cowdung cakes and a few dry *tulasi* plants and sandalwood pieces are got ready. The dead body is then washed and securely tied to the ladder-like bamboo bier and shrouded with the white cloth, keeping the face bare. The chief mourner, who is usually the son or in his absence the nearest relative, takes a bath. The bier is carried by four of the nearest relatives and close friends, who are led by the son to the cremation spot where a pile of firewood and cowdung cakes are laid.

1 P. V. Kane, History of Dharmashastra, Vol. II, Part I, p. 281.

The dead body is placed on the pile and covered with fuel and *tulasi* plants and sandalwood pieces. The funeral pyre is lit by the son and he, assisted by a friend, goes thrice round the fire with an earthern pot filled with water and then stands at the head of the pyre. Another person breaks the pot with a small stone and the son beats his mouth with the back of his palm. He then joins the rest of the mourners and they all wait there until the skull bursts and the sound is heard by all.

The stone with which the earthen pot is broken is known by its Sanskrit term, *asma*. It is carefully preserved for further obsequies as a symbol of the dead to whom water oblations are given on the spot by the nearest and dearest at a river or tank nearby. The mourners then return home. Throughout the evening, a lighted lamp is kept burning in the place where the deceased breathed his last. If the deceased is a woman with her husband alive, the preparation of the body for cremation is slightly more elaborate. She is decked with flowers, rubbed with turmeric paste and a *kumkum* mark is placed on her forehead. A handful of rice, a coconut and betel leaves are placed in her lap. The rest of the procedure is the same. Usually Brahman priests officiate at the cremation amidst the *vedic mantras* if the deceased belonged to the first three *varnas*. Otherwise, though the Brahman priest accompanies the funeral, the pyre is set fire to without any *vedic mantras* and is known as *bhadagni*. The third day, the son, accompanied by a few friends and relatives, visits the cremation ground and collects ashes and whatever bones have been left behind, at the spot where the dead body was cremated. These are then consigned to a stream or river while those who can afford to do so, take them to Nasik, Narsobawadi or Prayag river. The most sacred of these three is considered to be Prayag as it is the confluence of the Ganga, the Yamuna and the Sarasvati and is called *Triveni Sangam*. In Goa, the bones are immersed in the river near Naroa or in the sea. After the death, *sutak* (ceremonial impurity) is observed for ten days.

On the tenth day, all members of the household take a purificatory bath and all clothes are washed. The son of the deceased takes a clean shave known as *kshoura* and a bath. The symbolic stone, i.e. *asma*, is then washed with cowdung and rice oblations are offered to it in the cremation ground. Presents of money and commonly used articles like clothes, shoes, an umbrella and a cow are given to Brahman priests. When oblations are offered by the son and others in open space, crows are expected to come and dispose them off. If this is not done soon enough, it is believed that the deceased has some desires unfulfilled and those left behind give him some

assurance or other regarding some matter or the other. When that has been done, the crow is expected to touch the oblations. If the crow still doesn't do so after a while, an artificial crow made of *kusha* grass is made to touch the oblation by a priest. After this procedure, the mourners return home.

On the eleventh day, all members of the household sprinkle *panchagavya* all over the house. This is a liquid mixture made of cow's milk, curds, cow's urine, ghee and cowdung. New sacred threads are worn. The ritual *sapindi sraddha* is held on the twelfth day. By virtue of this ritual, the deceased joins his previous three ancestors, that is, his father, grandfather and great grand-father. On the thirteenth day, a *sraddha* is performed in the name of the dead. Relatives and friends are invited for meals. After this, every year, on the day on which the deceased died, *sraddha* is supposed to be performed. However, of late, this old ritual is not rigidly adhered to, though charity is usually given in the form of prizes and scholarships and the like.

Religious Duties, Superstitions and Omens

Generally speaking, a Goan Hindu is religious minded and mostly observes religious duties. In orthodox families of Brahmins, *Kakbali* is performed on no-moon day and on other such occasions. It is customary among the elderly people to participate in the palaquin (*Palakhi*) procession of the family deity every week or fortnight.

Much consideration is given by the people to good omens (*shukuna*) and bad omens (*Ashubha*). For the commencement of every important work, people generally consult the astrologer to find out *muhurta*. There are a number of people in Goa who, in case of a dog bite or a snake bite approach the *mantrika* instead of going to a doctor.

GAUDAS

Gaudas are aborigines of Goa. Formerly they had a settlement in the princely state of Sawantwadi in the adjoining Ratnagiri district in the Maharashtra State, too. They are also known as *kunbi, gaon-kar, velip*, etc. As per one tradition, they are called Gaudas as it was considered that they have come from Gauda Desh. The origination of the term Gauda according to some linguists can be traced to *Ganv*, that is, village. The third source ascribes the etymology of the word Gauda to a colloquial language once spoken by them which is now extinct. Gaudas in Goa speak Konkani. They belong to the Munda section of the Astroid race[1] and they are supposed to have

[1] *Bharatiya Sanskriti Kosh*, Vol. II, p. 799.

migrated from S. E. Asia into Assam, Orissa, Bengal, Kerala, Malabar and Goa. Though it cannot be traced as to when they migrated to Goa, it is definite that they were the first to settle in Goa even before Aryans and Dravidians and it is a traditional belief that it is only this community that brought crops such as rice, coconut, arecanut, plantains, black pepper, etc., into this region of the country. In respect of colour, features and customs, similarity can be traced between the Gaudas and the Santals. During the olden days they were mostly working as palanquin bearers. However, nowadays, agriculture is their main occupation. Some of them are engaged in manufacturing salt and are known as *mith* (salt) Gaudas. Gaudas generally do not eat meat either of goat or chiken but only that of wild animals and birds.

The actual Census of the Gaudas separately has never been conducted. However, the estimated population of the Gauda community in Goa is placed anywhere between 25,000 and 30,000. As per unofficial reports, in Canacona taluka there are 371 Gauda families. Considering that the average family consists of six persons, the estimated population of Gaudas in this taluka would be about 2,500.

Gaudas in Goa are divided into three main categories *viz.* Christian Gaudas, Hindu Gaudas and Nava Hindu Gaudas. Goud Gaudas, who claim to be servants of the mythical hero Parshuram, the supposed founder of Goa, are a caste of landless labourers once held as Untouchables. Nava Hindu Gaudas claim that they were Goud Gaudas who were baptised by the Portuguese sometime during the middle of the 16th Century. They were reconverted into Hinduism around the year 1928. The Gaudas are considered to be faithful and self-respecting persons. The males usually wear a *langoti*—a square piece of cloth first passed at the front by its corner from the waist-cord or girdle and its corner then drawn tightly between the divide of the buttocks and tucked behind. The surplus front portion may be allowed to dangle loose or is passed behind the legs and secured cleverly so as to cover the buttocks. As a head-dress they wear *mundase*, a sort of turban, and have coarse woollen blanket over their shoulders. Ladies belonging to the Gauda community use eight yard saris. The mode of wearing the *lugade* favoured by them is with the hind pleats tucked into the waist at the back centre and the ornamental end (*padar*) of the sari passed from the back of the waist under the right arm drawing it across the chest and over the left shoulder. These ladies were not

[1] *Bharatiya Sanskriti Kosh*, Vol. II, p. 799.

accustomed to using a *choli* (bodice). However, in 1940, the Portuguese Government, under a decree, prohibited these ladies to attend the bazaar or to move in public places without wearing a *choli* (bodice) or blouse. Their hand ornaments mostly comprised brass bangles.

As already stated, they were the original settlers of Goa even before the advent of the Aryans and had adopted Hinduism as their religion with the advent of the Aryans on the scene. Many of them in the Old Conquest were converted to Christianity. But even then, the mark of old traditions and customs remained over the Christian Gaudas also and they have even now, belief in Hindu temples, system of *prasad*, etc. Even now, these people worship before the cross with offerings of flowers and candles, yet they also perform *tulasi puja*. In 1928, about 10,000 Christian Gaudas were re-converted to Hinduism but they could not be assimilated with the Hindu Gaudas and are known as Nava Hindu Gaudas. However, they are slowly getting assimilated amongst Hindu Gaudas. The Gaudas consider themselves to be the descendants of the Hindu Pauranik King Bali.

They perform a peculiar folk dance known as *jagor* and *dhalo*. *Phoogdi* is one of the most popular and prominent form of dance.

As is evident from the houses of the Nava Hindu Gaudas at Chimbel, their houses are built wall to wall, nicely arranged in a square. In front of every house is an open space or quadrangle where they conduct religious and cultural functions. In many of the houses, in the square, is seen a big cross by the side of the *tulasi vrindavan*. The houses of Goud Gaudas are of medium size, built wall to wall.

The marriage alliance is arranged and settled by the parents and instead of the bride's parents searching for the groom as is witnessed in other communities, the groom's parents search for the bride. Afterwards, advice is sought from *ghadi*, also known as *panchakshari*. Thereafter the *prasad* is sought from village deities. At the time of marriage, the bridegroom has to pay the bride some cash, besides plantains, arecanut, tobacco, etc. A red coloured sari known as *dhato* has to be presented to the bride. The marriage ceremony proper takes place at the bride's place. After the groom has been given the haircut, he is bathed. After this, the bridegroom runs away, refusing to marry the bride chosen. He is searched out and forced to sit on a *pat*, a low wooden stool. The next day the bridegroom goes to the bride's place in procession. There, he is prohibited entry into the bride's house, by her parents. After some questions have been put

to the groom's parents, the groom's party forces its entry into the bride's house. After the marriage ceremony is over, a luncheon is given to the entire village populace.

The first delivery of the expectant mother takes place at the in-law's place. After delivery, the mother is given a bath on the third day and again on the seventh day. On the third day, a luncheon is given to the entire population of the hamlet and on the seventh day it is given only to the female population of the hamlet. The naming ceremony takes place on the nineteenth day.

The main deities worshipped by the Hindu Gaudas are Bali, and Bhima, one of the Pandavas. Many of them particularly in the Canacona taluka, worship Mallikarjuna. The family deities of Goud Gaudas of Chimbel are Mahalsa, Kamakshi, Betal, Shivaikar, Folkar, Shantadurga, Mallikarjuna, Mahadev, Boma, Kamaleshwari, Nagueshi and Lohanai, and the family deities of Nava Hindu Gaudas are Ravalnath, Mallikarjuna, Betal, Mahadev, Kamakshi, Nava Durga, Mahalaxmi, Chamundi and Shantadurga.

The imoprtant holidays observed by Hindu Gaudas are Ganesh Chaturthi, Tulasi Marriage and Bali Pratipada. On Bali Pratipada, a miniature cattle shed of cowdung is made and worshipped in the household cattle shed, placing therein *karata* fruit, mounted on four small sticks which represent cattle. The cattle are honoured, worshipped, decorated and fed on *pole* in the morning, and this is the only day of the year that cattle are honoured in this manner. Young shepherd boys move from place to place carrying on their heads a wooden idol of Lord Gopal Krishna. This day is particularly celebrated in the temple dedicated to Devaki-Krishna at Mashel.

They either bury or burn their dead. Just to pacify the soul of the deceased, they take *prasad* from the village deity. A piece of copper plate is handed over to the *Gurav*. The *Gurav* praises the deity and the soul of the deceased is supposed to have entered the plate of copper. This plate of copper is returned to the head of the family of the deceased and is known as *dama*. The *dama* is then worshipped on every no-moon day and holiday.

CHRISTIANS*

Of the total population of 7,95,120 of the district of Goa, as many as 2,70,126 have been returned as Christians as per the Census of 1971. It gives a percentage of 33·97 to the total district population. In the last century, the Christians were about two-thirds of the entire population as can be seen from the 1851 Census according to which Christians numbered 2,32,189, Hindus 1,28,824, and Muslims 2,775.

* This section has been contributed by Shri Evagrio Jorge, Editor (Uvad), Panaji, Goa.

Christianity existed in India ever since its foundation and the vestiges of its earliest existence were also found in Goa. Christians in the district are popularly known as *Kristanv*. The bulk of the present day Christians in Goa are local people converted in mass to Christianity during the Portuguese rule in the 16th Century. Almost all the Christians of Goa belong to the Roman Catholic Church to which the Portuguese, their former masters, also belonged.

The Christians of Goa are more Westernised than the other sections of the Goan people and even the Christians in other parts of the country. At the time of conversion, the Indian names of the converts were changed to Portuguese names, many of them being of biblical sources and others pertaining to the flora and fauna of Portugal. The following quotation from the "Goa Inquisition" by Prof. A. K. Priolkar clearly illustrates this practice :

"The baptism of Loqu was celebrated with great eclat. The Archbishop officiated personally at the ceremony and the Governor acted as Godfather. Loqu, his wife and nephew were given the names of Lucas, Isabel and Antonio, respectively".

The names in common use among Goan Christian men are Andru, Anton, Dominik, David, Inas, Forsu, Francis, Ghabru, Kaitan, Kistu, Luis, Nikol, Norbert, Paulu, Pedru, Roki, Rumas, Simao, Victor and Zitu and among women, Anamaria, Angela, Arkanj, Inasin, Isabel, Fatima, Philomen, Konsu, Kristalin, Lushi, Marian, Mary, Natalin, Rita, Romana and Rosin. They have European surnames such as Gomes, D'Sa, D'Souza, Fernandes, Rodrigues and Saldanha, which their ancestors are said to have received from those who stood sponsors to them at the time of baptism. Some of them bear local surnames also.

The notorious Holy Office of the Inquisition with its hundred and odd edicts enacted with impunity drastically changed almost all the Indian habits and customs of the Christian population and forced them to change the Indian dress and folk lore for the Portuguese or a strange admixture ever different from the one followed by the Hindus.

It is said that the exodus of Hindus to regions outside Goa to avert conversion by force was followed by that of the newly converted Christians as well as those who were unable to bear the additional oppression of being forced to change their ancestral habits and customs. Most of the Catholics from Mangalore are said to hail from Goa. While even to this day we see Catholics in Mangalore donning a *dhoti*, Christians in Goa have since centuries ago, under official compulsion discarded the Indian mode of dress. In spite of

all these oppressions, the Christians of Goa have to this date retained many of the Indian habits and customs. For instance, the bulk of the population speaks Konkani with only a few families using Portuguese or English in their homes or for social conversation and observe the caste system as followed by the Hindus. At the time of birth, marriage or death, Christians adhere to the old practices and prejudices. Goan Catholics still keep to the old distinction of caste despite their conversion from Hinduism nearly 400 years ago. Caste distinctions were not discouraged by the Portuguese clergy because they thought the caste distinction corresponded to their class system of *nobreza, clero e povo* (nobility, clergy and common folk), or partisans and plebeians. The castes that the Catholic follow are the same as those observed among the Hindus of Goa except that all she sub-castes of the Hindu brahmins have got fused into one single caste of *Bamonn* (Catholic). The *Kshatriya gaonkar* and the *Vani* have got fused into one single caste of *Charddo* and all the remaining castes and sub-castes have got fused into the *Shudra* caste including the untouchables of the old. In the social status there exist some sub-castes such as *Sonar* (corresponding to goldsmiths or *Daivajnya Brahmin*), *Kansar, Agri, Gavddo, Kharvi, Render* (*Bhandari*), *Charmar* and *Mhar*. The last two of the sub-castes are looked upon as some kind of very inferior class of man even among the Catholics.

Caste got firm roots among Catholics because the pattern of Goa villages is the same as the one followed in the rest of the country. Generally, one superior caste, either *Brahmin* or *Charddo* occupies the best of the central places of the village while the other castes live on its periphery. Again in the social strata, the *gaonkar* is generally the dominating caste, that is, either the *Bamonn* or the *Charddo* (seldom are both these castes placed together in one village). The other castes who were supposed to be the servants of the higher castes lived as a common element. This position will be found sanctioned and documented in the now officially dissolved Church *Confrarias* (Confraternities).

In addition to castes, the Christian society is also divided into many classes which are based on wealth and professions. Thus there are many Brahmin families and *Charddo* families who consider themselves aristocratic because they own extensive land which gives them considerable income. They live in palatial houses and educate their families well. There are a few aristocratic families belonging to the *Shudra* caste too. Some families whose male members work or have worked as butlers or stewards on ships and amassed quite a fortune, have also built palatial houses and live in opulence. Similarly, those who have amassed wealth in business live as a class apart.

Besides, there are professional groups such as toddy tappers, fishermen, carpenters, masons, etc.

Religious Organisation

The Goan Christians have their religious rites and ceremonies regulated by the Canon and Liturgical Laws of Roman Catholics the world over. The actual governing administration of the Roman Catholics in the district vests in the Apostolic Administrator of Goa with his headquarters at Panaji. He has under him a Vicar General who is assisted by priests in charge of parish churches, small churches attached to parish churches, and chapels. The Apostolic Administrator of Goa is directly responsible to the Pope in Rome and his jurisdiction extends over the Union Territory of Goa, Daman and Diu. At present, there are 145 parish churches and 571 chapels in the district.

The parish priests, the residential chaplains and the curates or assistants, are given a subsistence allowance at the rate of Rs. 200, Rs. 150 and Rs. 135 per month respectively, besides a stipend, varying between Rs. 150 and Rs. 180, the expenditure towards which is met from the donations of the parishioners. The allowance is paid from the interest accrued from the parish funds. In case the parish does not have enough funds, then the allowance is met from the Diocesan funds.

It may be mentioned here that till the middle of the 19th Century, the Roman Catholic priesthood was mostly confined to *Brahmin* and *Charddo* Christians. However, this practice is on the decline following the modern trends and progressive developments taking place in the Church hierarchy.

In every Christian home can be seen a small figure of the crucified Christ on an altar or in an oratory or in a niche. The more religious among the Christians pray five times a day; on rising, at mid-day, at sunset, shortly after sunset, and on retiring to bed.

Sacraments and Customs

The ritualistic customs observed by Christians are covered by the aim that the person should save his soul applying to himself the merits obtained for mankind by Christ. There are seven such sacraments. They are, Baptism, Confirmation, Confession, Holy Eucharist, Extreme Unction, Holy Orders and Matrimony. Of these, Baptism and Matrimony are considered important among all the Christians.

Baptism

The child is brought to the church for baptism with two persons termed god-parents who answer in the name of the child the questions put to the child by the priest.

The priest after putting a pinch of specially blessed salt in the mouth of the child, then anoints it with holy oil. He then solemnly asks the child whether it desires to receive Baptism and on the god-parents answering for it in the affirmative, performs the really essential rite of Baptism. He pours especially blessed water on its head, saying meanwhile " N (here he addresses the child by its name), I baptise thee in the name of the Father and of the Son and of the Holy Spirit ". The name by which the child is addressed remains henceforth as the Christian name of the child. The ceremony comes to a close when the child is once again anointed with Holy oil (different from the previous one) and the child is presented with a white garment, a symbol of Purity and Innocence, and a lighted candle a symbol of Preparedness and Vigilance. Among the higher strata of the society, a feast is provided to relatives, friends and well-wishers who have gathered on the occasion. Relatives, friends and well-wishers on their part give suitable gifts to the child baptised Though most Christian churches ordinarily administer Baptism to children, they have also, provision for Adult Baptism in the case of adults converted to Christianity.

Death and Funeral Rites

Christians are very much concerned about the administration of a priest to a sick person in danger of death. The priest gets the patient to review, as far as it is in his power at the time, all the wrongs he has done, all the sins he has committed and then induces him to be really sorry for what he has done and to ask God's pardon for his sins Then the priest, by virtue of the power given to him by Christ, gives him absolution, i.e. in God's name forgives his sins. If the patient is unconscious, he is given what is called the Sacrament of Extreme Unction. The priest anoints the vital senses of the dying man with a specially blessed oil, and prays to God to forgive the dying man for whatever wrong he may have done through the senses.

Christians bury their dead. The well-to-do lay the body in a coffin and the indigent carry it on a church bier The hands are tied together across the chest and a small crucifix is placed in them. When the body or the coffin is lowered in the grave the priest first puts a few handfuls of earth over it and then the mourners follow. On the seventh day and on the thirtieth day and on the first anniversary and in some cases, every year, solemn office and mass are sung for the repose of the soul of the dead, and all persons who attend are given a festive dinner or breakfast. Recently, the Church has decreed that these masses are not obligatory. Black clothes are a mark of mourning and the close relatives of the dead person observe mourning upto one year.

SOCIAL LIFE

Hindus

Joint Family System.—As is seen in the rest of the country, in Goa also was prevalent, a joint family system among Hindus. With the increase in population, a number of persons belonging to the younger generation started migrating to Bombay and to other parts of the neighbouring states for their education and for earning their livelihood. As a result, this joint family system is waning away. However, a joint family system is a must for one or two families under the law. In their case, no descendant can inherit any share from the ancestral property and the entire property is treated as a collective property of the family and the responsibility devolves on the head of the family to provide necessities to all the members of the family.

Property and Inheritance.—Though the Portuguese in the initial stages of their rule usually tortured and harassed the Hindu population, they did not consider it necessary to make the Portuguese Civil Code applicable to non-Christians. The Civil laws in respect of Hindus were based on *Manu Smriti, Parashara Smriti, Yajnyavalkya Smriti,* etc. These usages and customs of non-Christians of Goa including Hindus were codified in the Usages and Customs Code of Non-Christians of 1854. It was further amended in 1880. However, in general, the provisions of the Portuguese Civil Code (Codigo Civil) of 1867 were made applicable to Hindus to the extent they were not in conflict with the Usages and Customs Code of 1880. Under the Civil Code, Hindu marriage is not considered as a sacrament but is considered as a contract, a contract with economic bearings. After marriage, the hereditary as well as self-earned property of both husband and wife is considered together and both of them get an equal share in the property. However, there was a provision under which property, hereditary as well as self-earned could be treated independently if the couple has entered into an anti-nuptial agreement before marriage. It may be mentioned here that this provision was hardly taken advantage of in Goa.

Under the laws of inheritance, if any one of the couple died earlier, that particular share was equally distributed amongst the children or amongst the grand-children in case of premature death of children. If there were no descendants, the right used to pass on to ascendants. In such circumstances, the property used to be inherited by the father or the mother of the deceased and in their absence, by the brothers and sisters of the deceased. In the absence of both descendants as well as ascendants, the right of the inheritance used to go to the counter part. However, it may be mentioned here that the division of property was avoided and the property used to be inherited on the husband's side only. Being co-owners, husband and wife could jointly

sell out their property. Either of them was free to give one's own share to any one or dispose one's own share to one's liking under a will.

Christians

Joint Family System.—The joint family system prevailed among the Catholics in olden days, but it soon gave place to the separation of each individual after his marriage. Some brothers even today try to live under the joint family system, but their desire to live together is generally undermined by their wives and in-laws.

Property and Inheritance.—Property, ownership and inheritance is regulated by the Portuguese Civil Code, which is based on the European continental system known as the Napoleon Code. In the event of one of the conjugal partners dying intestate, the property is distributed thus : one half to the surviving partner and the other half among the children equally. The property is owned commonly by both the husband and wife, no matter who contributed how much to the common pool. However, when the marriage is preceded or regulated by pre-nuptial contract, the administration of the property is in accordance with that contract. Sometimes, a condition is stipulated leading to complete separation of property, i.e., the husband drawing his own property and the wife her own, received as dowry or later earned by her. Another condition which is mostly put in such a contract, is that in case one of the partners dies without leaving any issue, the property taken by the wife to the husband's home is to be returned to her relations, or in other words, their property is governed by the regime of complete separation The situation is also different when both husband and wife or any of them have made a will disposing off their wealth in a different manner. The law provides however that children may not be disinherited totally, a parent not being free to dispose off more than one half of the 'disposable quota' i.e. the quota which was otherwise to go to the children. It is to be noted however, that although the Civil Code prescribes complete equality between sons and daughters, in practice, sons are made heirs to all the landed property while daughters are only provided with dowry and gifts. In such cases, daughters of landowners generally get far less than the value of their share of property. A complicated system of pre-nuptial contracts and other deeds, is resorted to, so that the daughter or her family on her husband's side will not claim any share of the ancestral property on the death of her parents. Even then, there are cases in which daughters have sued their brothers for a share in the property of their parents. In less rich families, many a time daughters get more than the sons, because while the latter do not get any property worth the name from their parents, daughters collect fat dowries and gifts on the occasion of their marriage. That is the

reason why the birth of daughters is not welcome while those of sons is considered profitable for the household, as they are regarded as the bread-earners and supporters of the parents in their old age.

In certain families of higher castes only one or two boys or girls marry and others remain unmarried in order to prevent distribution of wealth which will bring down the standard of living of the family. In such cases generally, the unmarried boys and girls take to jobs, such as primary teachers, pharmacists, etc., to maintain themselves.

MARRIAGE AND MORALS

Hindus

Under the Portuguese Civil Code which is still not repealed, monogamy was a must to all whether Hindus, Christians or Muslims, irrespective of religion.

Hindus consider marriage as one of the *sarirasamskaras* (sacraments sanctifying the body) and as such it is a tradition of several centuries that every man and woman must pass through marriage at the proper age and time and this is obligatory. Being a sacrament, marriage rituals are generally the same, at least among the higher castes. Mainly, there are three forms of marriage ceremonies. The traditional form is mainly based on rites prescribed in the *grihya sutras* with the free use of Vedic *Mantras*. In the Pauranika form, Pauranika *Mantras* are used instead of Vedic *Mantras*. The third form of marriage is preached by the reformist wherein ritualistic details are curtailed with a view to winding up the ceremony in a day or two.

Marriage alliance is generally arranged or settled by the parents or guardians of the groom and the bride concerned. The initiative in matchmaking is generally taken by the bride's parents or relatives as *Kanyadana* or giving a daughter in marriage is always considered as meritorious.

Before settling the marriage, horoscopes of the girl and the boy are compared with each other and if they agree, then only can the next stage in the marriage settlement take place. The next step in the settlement of marriage is that of taking Prasad[1] from the family deity, that is, taking consent of the family deity through Tantric means.[2]

Though the custom of consulting and comparing horoscopes is gradually fading away, it is particularly observed by a number of

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[1] This system known as Prasad—Kaula is very common in South Konkan.

[2] This custom is seen throughout the world. The consent of the God is obtained in the following manner : The person who seeks the permission for a particular act of his discloses his intention to the priest. The priest then picks five or nine grains of rice or flower petals and places them on both the left as well as the right side of the deity, right from the head to the feet. If the flower petal or the grain of rice on the right hand side falls down, the God is said to have consented to the desires of the devotee, and if the grain of rice or the flower petal from the left side falls, it is considered as a reply in negative from the God.

families belonging to *Dravid brahmans*, *Saraswat brahmans*, *Daivajnya brahmans* and *Vaishyas*.

Marriages of bride and groom belonging to the same *gotra* or *pravara* did not usually take place formerly, and if it was to be undergone, then the bride was adopted by someone and then only could marriage take place. However, these sagotra marriages are now considered lawful and valid. The prohibited degrees of kindred for marriage beyond agnates vary according to the customs followed by the particular community concerned. Union between a brother's daughter and sister's son is particularly encouraged. Marriage with the wife's sister is allowed. Brother may marry his brother's wife's sister allowing sisters to become sisters-in-law.

Age of Marriage.—In the olden days it was customary to get the girl married before she attained pubeity and marriages usually took place between the ages of ten and fourteen in respect of girls. The age of the groom was usually between twenty and twenty-two. The choice of the bride was never left to the groom and the selection was made by the parents. With the spread of education among women and the change in other social conditions, the girls and the boys usually get married by the time they attain the age of twenty to twenty-five in respect of girls and twenty-five to thirty in respect of boys. The marriageable age in respect of most of the communities excepting Saraswat Brahmins, Dravid Brahmins, Kshatriya Marathas and Gomantak Marathas, still tend to be at a young age. As the marriageable age has now been raised and the bride and the groom have better understanding and are aware of the meaning of marriage, the consent of both the bride and the groom is also taken before marriage.

After the marriage alliance is settled, *Kaulu-Prasad* is obtained from the family deity of the bridegroom and if it is favourable, sugar is distributed to the assembled.

Betrothal.—Nowadays, *sakharpuda*, i.e. exchange of sweets in token of the settlement of marriage, is also performed at the bride's place. That day, friends and relatives accompanied by the elderly people in the family of the groom go to the bride's house and present her with *sadi* and at times ornaments Sweet balls (*ladoos*) and light refreshment is given to the assembled. This ceremony indicates the fixation of marriage.

After this ceremony is over, the *muhurta* (auspicious day and time) is found out for the marriage ceremony proper. In Goa it is necessary to obtain registration under the Portuguese Civil Code before the marriage as per the Hindu tradition takes place. Certificate of birth, vaccination and domicile is to be produced at the time. In the presence of two or three witnesses the registrar inquires with the bride and groom whether they are getting married of their own will or whether it has

been forced upon them. If the marriage in the traditional Hindu system takes place before the registration, it is considered as an offence and the priest is held responsible for the same.

Ceremony Proper.—Formerly once the marriage is settled and *muhurta* is fixed, then the preparations of the marriage ceremony is started as early as fifteen days to a month. One of the important items of the ceremony is *halad*—applying turmeric paste. A party of *suwasini* (married women having husbands alive) hereinafter called *suwasinis*, used to go to the bride's house and smear the bride with oil and turmeric paste and give her a hot water bath. The remains of the turmeric paste and oil is taken back to the groom's house and is applied to his body and he is then given a hot water bath.

Maid-servants used to grind five types of grains mixed together on querno-stone, when five *suwasinis* sing songs in an 'ovi' metre. This system is waning away especially among brahmins, though most of the communities still follow this system.

Thereafter *patrikas* i.e. invitation cards are sent to the relatives and friends. The first of the invitation cards is always given to the family deity and the village deity. On the day prior to the marriage, green bangles are put on the hands of the bride and these bangles are known as *lagna chuda*. Formerly marriages used to take place at the residence of the bride. However, nowadays, marriages take place mostly in the *Agrashalas* (rest houses of the temples) where the families of both the bride and the groom assemble.

Either on the marriage day itself, or on the previous day, a number of propitiary rites are performed both at the bride's and the groom's house. The first rite of the day is the *punyahavachana* or holy day blessing, conjoined with the *devakasthapana* or installation of deities which the boy and his parents and the girl and her parents—in their respective houses—perform, at about seven in the morning. It may be mentioned here that in respect of a number of castes and communities the guardian or the *kuladeva* is the branch of some tree. The next to follow is *nandishraddha*, an auspicious rite requesting the presence of the spirits of the forefathers in the house to bless the wedding. This is followed by *mandapadevata pratistha* which means establishing the booth deity. As the wedding draws near, the bride's father, accompanied by his priest, goes to the groom's house and formally invites him to hold the marriage at his residence. Meanwhile, in the orthodox fashion, the bride is clad in yellow *sari* known as *astaputri* or *vadhuvastra*, generally a gift from the maternal uncle of the bride, and a short sleeved backless bodice. She sits before *Gaurihar* (the marriage God which is an image of Siva and his consort Gauri) in the house, and throws a few grains of rice and sesame over the image, chanting,

" Gauri, Gauri, grant me a happy wifehood and long life to him who is coming to my door.".

Then comes the wedding day. The actual marriage ceremony is a lengthy affair consisting of numerous stages. Among the principal of these is the *Simantapujana* which is mainly the reception and felicitation of the bridegroom at the entrance of the town, now performed at the residence of the bride. *Vadhugrihagamanam* is the stage of going to the residence of the bride. On the bridegroom's arrival at the door of the bride's residence, he is made a respectable offering and this stage is called *madhuparka*. During the ceremony of *parasparanirikana* (having a glance over each other), the bride and groom gaze at each other through the screen called *antarpat*, and the bride then garlands the groom. This is followed by the actual ceremony of giving the girl in marriage known as *kanyadana*. The hands of the bride and the groom are joined by the father, a pot of bell-metal is held by the priests under their joined hands and the mother pours water with some silver coins in it over their clasped hands. This is the process followed for *kanyadana* or giving the girl over to the bridegroom. Considered to be a highly meritorious act on the part of the Hindu house-holder, *kanyadana* is performed amidst chanting of the benediction in Sanskrit. *Vivahahoma* is the ceremony of the offering of oblation by throwing ghee into the sacred fire in honour of the marriage, and this starts the operative and essential portion of the marriage ceremony. Next to follow is the *panigrahana* or the taking by the hand. Another ceremony during this stage of the marriage is *lajahoma* or the throwing of parched grains into the consecrated fire. The last step in the ceremony is the *saptapadi*, when the bride and the bride-groom walk together seven steps around the sacred fire making the marriage irrevocable. Only on the conclusion of this final step is the actual marriage considered complete. Now come the concluding ceremonies, mainly, the *varat* or the homeward return of the bridegroom and the bride in a procession, and the *grahapravesh* which is the ceremonial home-entering of the newly-wed. When the procession comes near the house, the bride and the groom are led towards the gate. At the gate, over the *humro* (the under crosspiece of the door frame) is kept a measure full of rice. While entering, the bride topples the measure with her legs and enters the groom's place. Thereafter takes place the naming ceremony of the bride. The proposed name of the bride is written by the groom on a plate (tabak) full of rice, by a golden ring on his finger. However, nowadays, the name of the bride is not changed in many cases.

Formerly it was customary to give luncheons to the entire village populace as also to all the friends and relatives. However, due to

scarcity conditions prevailing in the country and the increasing cost of living nowadays, only refreshments are provided at the time of the marriage or at the reception especially held. It is customary for friends and relatives to give presents (*aher*) to the bride and the groom as a token of affection. Giving of *aher* was formerly confined only to close relatives and friends and was done at the time of *punyahavachana*.

For a number of times during the first year of marriage particularly, and twice a year after, at least on the occasion of Ganesh Chaturthi and Tulsi-lagna, sweetmeats are exchanged between the families of the bride and the groom. Particularly at the time of Tulsi-lagna, wicks (*vati*) are sent to the bride and are burnt at the time of *Tulsi-Vivaha*.

Dowry System.—The dowry system still prevails in Goa as elsewhere in the country. Formerly, this question never arose because marriages always took place amongst families with equal standards. The rich used to marry the rich only, the middle class with the middle class and the poor with the poor. However, the dowry that is to be paid is now dependant upon the education and as such the question of dowry has assumed significance of late. The highly qualified youth goes to the extent of asking for a dowry of Rs. 1 lakh in Goa. The amount of dowry has always tended to be on a high scale and this is a problem for the girls in the poor and middle class families.

Inter-Caste and Inter-Religious Marriages.—The incidence of inter-religious marriages, mostly Hindu/Christian marriages, was very low prior to the liberation of the territory. It is on the increase since Liberation and this can be attributed to higher education among both the sexes, women seeking employment and cultural meets. This has also given rise to inter-caste marriages since Liberation. However, incidence of such marriages is very low.

Widow Remarriage.—Though widow remarriage was allowed in respect of certain communities, the benefit of it was very rarely taken as the communities themselves in which window remarriages were allowed, used to look with contempt on the remarried widow and consider her as a *kapad nesleli bael*. However, in exceptional cases, as in the case of those widowed at an early age, widow remarriages do take place on rare occasions, since Liberation.

Divorces.—The right to divorce was conferred on both males as well as females under the Common Law that was made applicable to the entire population of the territory during the Portuguese regime. But the benefit of the same was rarely taken and that too, only if either of the couple was mentally retarded or insane or suffering from some infectious disease like leprosy, etc., or if the wife could not bear any children. There are very rare cases of the wife asking for divorce for infidelity on the part of her husband.

Statistical data relating to divorce filed and decided in the district prior to Liberation is not available. However, six cases of divorce were instituted within the jurisdiction of the tribunal of Bardez (Mapusa), under the Portuguese law before Liberation. From 1961 onwards till the end of 1974 there were 75 divorce cases reported to have been filed by Hindus, Muslims and Christians, in the Courts of Civil Judge and Judicial Magistrate, First Class at Panaji, Bicholim, Margao, Mapusa, Quepem and Vasco-da-Gama. No divorce cases have been filed in the jurisdiction of the Court of Ponda.

Civil Marriages.—The registration of marriages under Civil Registration Code is compulsory in the district without distinction of castes. It is learnt from the Civil Registrar-cum-Sub-Registrar of different talukas of the District that 30,434 marriages were solemnized during the period 1961-75. The year-wise statement of these marriages is furnished below :—

Year	No. of marriages
1961	2,056
1962	2,049
1963	2,088
1964	2,144
1965	1,934
1966	2,118
1967	2,277
1968	1,564
1969	2,104
1970	1,833
1971	1,974
1972	2,218
1973	1,954
1974	2,079
1975	2,042

Position of Women.— Women in India, Goa not excepting particularly among Hindus, were always required to play a subservient role in the family affairs and were never treated as equals by males. She had always to depend on her father in her young age, on her husband after marriage, and on her sons in her old age. In Goa it was a practice, particularly amongst the rich families, that huge dowry in the form of gold was paid at the time of marriage and it was customary that the in-laws also should give more if not equal number of ornaments to the daughter-in-law. This was considered as *stri dhana* (property of the woman). Under the Common Portuguese Law, the daughters also had equal share in the father's property. However, in a number of

cases, with a view to avoiding division of the father's property, daughters relinquished their rights.

If the girl is married into a poorer family, the girl's father used to give huge amounts in relation to his income and property to the in-laws so that the girl should not claim a share in the ancestral property. In the absence of male heirs, the property used to be inherited by the daughters. It was many a time noticed that women in the labourer class worked along with their male counterparts and earned their livelihood and had equal say in family affairs.

Female education in Goa commenced about forty years ago. However, prior to that, many Hindu women had the knowledge of the three R's and were able to read and write Marathi. Almost all the ladies belonging to the upper strata of the society were well versed with the stories from Ramayana and Mahabharat. Though Hindu girls started taking education, they usually studied only upto the fourth standard. It was only around 1950 that they started studying upto the seventh standard and a few even went on to English education. Girls embraced the field of higher education only after the liberation of the territory since 1962. A number of girls have now taken degrees and Post-Graduate degrees and are now employed. They help their families as also themselves by collecting necessary money required to pay for their dowry. However, in a majority of cases, especially among the economically backward classes, women are deprived of education beyond obtaining the basic level of literacy.

Prior to Liberation, no Hindu women could be seen on the streets of Goa after dusk, and they never used to move out unless they were accompanied by males. However, nowadays women take to marketing, they go out for a stroll, they enjoy movies and dramas and they undertake travels alone too. In spite of this it must be mentioned here that males in general have always looked upon females as inferior to them and this position still continues.

Prostitution and Devdasis.—Formerly there was no taboo on keeping a mistress and to have a mistress besides a wife particularly for the rich and landlords added to their prestige in the society. Prostitution as found all over the world, is witnessed in Goa too. Perhaps it is in Goa only that we find divisions amongst prostitutes also separately for Hindus and Christians. The trace of prostitution in Goa can be found in the institution of Devdasis. During historical times, the village was established around the temple and servants were employed for the daily services to be rendered to the deity. It included *pujari* (worshipper), *abhisheki*, *vajantri*, who used to play on *shehnai* a sort of wind instrument, and they were allotted lands for services rendered. Amongst these servants were included Devdasis which were of two types, Bhavin and Kalavant. Amongst the two, Kalavant enjoyed

higher status as both male as well as female members of these families were required to acquire skill in the art of dancing and music. Bhavins used to sweep the floor of the temple, clean lamps, etc., while the duties of Kalavant were to sing and dance on festive occasions. Both male as well as female members amongst Bhavins and Kalavants were not allowed to marry, and as such in the case of girls, even before they attained puberty, the ceremony known as *shes* in the case of Kalavant, had to be undergone. The *shes* ceremony included a prototype of marriage in which the girl garlanded a knife held by another girl dressed in male attire, after which she was free to be a mistress. However, if a Kalavant became somebody's mistress without undergoing the ceremony of *shes*, she was looked upon with contempt. Once this ceremony was over and after the girl had attained puberty, *hatlavni* used to take place, when a rich youth would pay a sum of several hundred rupees to possess the girl for the first night and keep her as his mistress for one year, paying a huge sum of money to her mother. During that year, she assumed the status of a second wife and even considered his family her own. After the first year, if he so desired he could continue to keep her as his mistress sometimes even until his death, after which she lived a widowed life. However, if her benefactor left her before his death, she was free to seek another partner. It may be mentioned here, that she always remained faithful to her benefactor. Even after becoming somebody's mistress, the girl continued her services in the temple. In the case of Bhavins, a girl was free to practice prostitution if no one came forward to take her as his mistress for life and she was not expected to remain as faithful to her benefactor as was a Kalavant.

There was another type of prostitute known as *Chedva*. These prostitutes generally belonged to the caste known as *Bandi*. They used to work as servants with big landlords and were given free accommodation on the plots adjacent to the owners' house. As they had to work in the landlord's house, they naturally came in contact with the young men in the owner's family and usually became their mistresses. However, it was not customary for these girls to be faithful to their employers.

Since Liberation, the prostitution referred to above is on the decline and girls and boys from these families which formerly followed prostitution are getting married. The prestige attached to keeping a mistress is also on the decline. This is also the result of the spread of education amongst these classes. The prostitution that is in evidence at the present is not based on caste.

The particular classes such as Kalavant, Bhavin, etc., referred to above which undertook prostitution, have united and have started

calling themselves as belonging to the Gomantak Maratha Samaj, since 1928.[1]

Consumption of Liquor and Gambling.—To prostitution are aligned the evils of drink and gambling. Formerly there was a taboo over drinking for Hindus, but during the last ten years or so it has become quite common and it is no longer considered indecent. The beginning of this change can be traced to the development of mining in the area, which made more foreign exchange available to the people to import foreign liquors. Even now, consumption of country liquor like feni, etc., is looked upon with contempt.

Gambling was also prevalent since ancient times. During the last few years, playing cards were used for gambling and a number of gambling dens could be seen, formerly, in fairs.

Christians

The Catholic religion does not sanction any other regime of Marriage other than the monogamic marriage, being considered a sacrament which in no circumstances can be dissolved. There are however, cases, though rare, of divorce under civil law, and in extraordinary cases, even the Pope authorises the dissolution of marriage.

Catholics from Goa generally marry within their own caste. Being free to marry among relations from paternal and maternal sides, they do not observe *gotra*. There are however, restrictions on marriage within certain degrees of consanguinity. There are cases in which an uncle has been permitted to marry his own niece (daughter of his own brother or of his wife's brother), but marriage between cousins of the first degree (or cousin-brother's as we say in India) are rare, such cousins being the progeny of either two brothers or two sisters or of the brother of the mother or sister of the father. These marriages falling within the "prohibited degrees" require special permission from the Bishop. They take place out of consideration of prevention of alienation of one's family wealth to other families, of difficulties to find partners in other families, etc.

Generally the couple is blessed by the priest in the Church, where a special Mass is said on the occasion. The priest also addresses a sermon giving his advice to the couple. Later, a reception takes place at the bridegroom's place or in a public hall with the guests dancing to the tune of western music provided by an orchestra. Dainty dishes and wines are served and at the end, the wedding cake is cut and the toast raised over a glass of champagne or wine by a distinguished person in the society. Sometimes another feast of this nature is also held at

[1] *Gomantak Maratha Samaj, Raupya Mahotsava Grantha*, Bombay, 1952.

the house of the bride, called *tornaboda* i.e. the return of the wedding party.

In the days preceding the wedding and succeeding it, many of the traditional Hindu customs are followed, such as bathing of the bride, singing of various songs, paring of nails, etc.

On occasions, when both the partners happen to be free thinkers or do not profess any religion, they prefer to marry under Civil Registration only i.e. without going through the Church ceremony. This also happens when one of the partners is a divorcee, as the Church does not allow remarriage of divorcees.

Girls generally marry at about the age of 21 and boys at about 27. Among the working class people, marriage takes place at a younger age, girls at about 18 and boys around 22, but among the educated or advanced people, it takes place at later ages, girls around 25 and boys around 35.

The process of inter-marriage between the castes and sub-castes is faster among the Christians than in other communities. In great cosmopolitan cities like Bombay and Delhi, Christians from Goa have married not only into different castes but into other communities as well. Similarly in the towns like Panaji, the townsfolk marry among themselves regardless of the caste factor. The builders of towns generally hail from classes and castes of contractors, masons, carpenters, traders, who on becoming rich, get acquainted with higher castes and marry their girls and boys.

Drinking.—Christians do not suffer from social inhibitions in regard to drinking. Drinks are freely served at social gatherings or to visitors in drawing rooms and all classes of people take a small quantity of liquor daily at home Generally women do not take hard liquor, but they are allowed to take wines or beer at social gatherings. Cases of drunkenness or the number of drunkards is comparatively small, but it is high in comparison with other communities. The incidence of mental diseases, cyrrosis of liver, etc, is rather high among Catholics due mainly to the consumption of liquor.

HOME LIFE

Hindus

Hindus in Goa generally prefer a leisurely way of life. As the standard of living of the people, even of the poorer section of the society, is comparatively higher than the one found in the neighbouring areas, they prefer good food, good clothes and good housing facilities.

Houses and Housing.—Houses of three different sections of the community, namely the rich, the middle class and the poor, are

naturally of different types. The well-to-do nowadays live in the houses which are constructed in cement concrete and equipped with all facilities. Among these can generally be included big merchants, industrialists, mine owners and landlords. Formerly only the landlords were considered as rich and as such, they stayed in the houses known as *wadas* with four quadrangles and these were generally constructed in stone available locally, with wide walls and a big entrance door. These houses generally had small windows. In the case of some of the houses, arrangement was made for guns to resist burglars and dacoits. Joint family system always gave rise to bigger houses. At the entrance there were balconies, then a hall and around the square were well-built stone or cement benches from where one could enter the rooms and upper storeys. Every house had a kitchen, a store room and a room for gods and a separate room specially reserved for conducting deliveries.

The houses of the middle class families were usually of the same type. However, these houses generally had only one square instead of four as was the case in respect of houses of the richer class. The roof was of local tiles.

With the liberation of the territory, there was witnessed a population influx with people from the neighbouring areas flocking into the district. It created a problem of residential accommodation for the increased numbers and ultimately resulted in the construction of multi-storeyed buildings with self contained blocks. Today the higher middle class and the richer sections of the society stay in such blocks, many times on ownership basis.

The furniture found in those houses was generally aristocratic or old fashioned. It consisted of a few benches, chairs, *kanapo*, swings, etc. In the absence of dining tables people used *parts*, low rectangular wooden stools, which were used both to sit on as also to keep the plates on. The use of such *pats* is witnessed even now in a number of cases. The type of furniture has undergone a vast change. It now consists of a dining table, chairs, sofa-*cum*-beds, tables, steel cupboards, radio sets, refrigerators etc. The drawing room and bed room are generally fitted with a ceiling fan whirling round and cooling the atmosphere.

Houses of the poorer sections of the society are generally constructed in mud with a ceiling of bamboo or wooden girders prepared from coconut, mango, madat trees and were generally covered with local tiles or palm leaves or grass. Nowadays in a number of cases, local tiles and palm leaves have given way to Mangalore tiles. Every house generally has a small courtyard in which is invariably witnessed a *tulasi* (basil) plant.

Male Dress.—The system of dress akin to Goan Hindus is similar to that found in the neighbouring state of Maharashtra. Whenever a change in the mode of dress has been witnessed in Maharashtra and particularly in Bombay, it had its repurcussions in Goa. During the olden days, the ordinary dress of upper class Hindu Brahmin males was *Pagoti* (a head gear), *dhotar* (waist cloth) with silk border, *angarkha* (a sort of long shirt), and *uparne* (a shoulder cloth), etc. The footwear of these people was *joda* (square toed red shoes of Pune). The men belonging to other castes usually wore *Mandil* (a sort of head scarf) and loose trousers or slacks. The poorer sections of the society put on *langoti* (a privity strip), a shirt, a headgear and a woolen blanket (*Kamble*).

The headgear has undergone a change. *Pagadi*, a performed Brahimin turban or a *rumala* (a freshly folded turban) gave way to the black cap, at times folding. On ceremonial occasions, caps trimmed with brocade were used. About thirty to forty years before, it was the fashion to use a Hungarian oval shaped cap. Many used red velvet caps and these caps had a tradition behind it. It was about three to four hundred years before, that the Portuguese allowed a few of the Vaidyas (medical practitioners following ayurvedic system of medicine), goldsmiths and merchants to stay in the capital city and imposed upon them the condition that they should wear a red cap. All these caps were replaced by a Gandhi cap, since Mahatma Gandhi started the Non-Co-operation Movement. However, nowadays it is customary to move bareheaded and the use of caps is found to be restricted only to the older generation. It was customary to use *angarkha* (waist coat) which has given way to long coat, short coat and bush coat. The use of *dhotar* (loin cloth) is seen even now to a greater extent in Goa than in other parts of the country. Even the poorer sections of the society have given up wearing only *langoti* and now they also use long pants and bush coats. College students usually wear tight pants, bell-bottoms and guru shirts.

The period 1910-50 saw a strange combination of Indian and foreign dress wear. Males belonging to the higher strata of society particularly, used *dhotar* with shirts tucked inside ; short coats, a cap or a *rumala* and closed shoes. Home dress of the Hindus was generally a *dhotar* 3½ to 4 yards in length and less in breadth than the usual *dhotar*.

Female Dress.—The impact of the Konkan region of Maharashtra State is also witnessed on female dress of the Goan Hindus.

The chief items of a woman's dress wear, in the district were, till recently, a sari, nine yards in length and the short sleeved '*choli* (bodice). The mode of wearing the sari was with hind pleats tucked into the waist at the back centre and the ornamental end (*padar*)

passed from the back of the waist under the right arm, drawn across the breast and over the left shoulder. The nine yard sari slowly gave way to saris five to six yards in length. Those who wore saris of five to six yards necessarily wore a foundation garment or *parakar* (petticoat) and underwear (*Choddi*). The *Choli* has also been replaced by *polake* (blouse), with long sleeves, then with short sleeves and then without sleeves with back and stomach almost uncovered. It was customary for the girls to use frocks upto ten years of age, then petticoats and bodice upto the age of thirteen or fourteen which was a marriageable age then and then a sari of eight yards after marriage. After the liberation of the territory, the girls many a time used Punjabi *salwar*, bell bottom pants, mini skirts, *lungis*, *gharara*, *etc.* Womenfolk in Goa usually were not accustomed to the use of *chappals* and moved barefooted. It is only since Liberation that ladies have started using *chappals*, sandals and all sorts of modern footwear. During the festive occasions women belonging to the higher strata of society usually wore *shalu*, *pitamber*, *paithani*[1], etc., and used to cover their back with *shal-pamari*. Widows usually wore a five yards poplin piece.

Ornaments.—Use of ornaments both in respect of males as well as females was very common during the olden days and it can mainly be attributed to the intrinsic value of gold. In the absence of any banking system and facilities for saving, it was customary for people to lock up their savings in gold, which gave rise to the use of different types of ornaments both among males as well as females. Use of ornaments without exquisite skill, particularly in the rural areas, clearly indicated that ornaments were mostly worn and prepared for the intrinsic value of gold.

Males usually wore *bhikbali*, a ear-ring of gold set with pearls and a pendant of emerald used on the upper lobe of the right ear ; *choukuda*, a sort of square ear ring with pearls strung with gold thread. They used to wear *kanthi*, a necklace of gold ; *bahubal*, worn high up on the arm ; *peti*, worn on the wrist of the right hand, *salkadi*, worn on the left hand and one or more *angthyas*, finger rings of solid gold, at times with engraved seals. Gavdas and other agricultural classes used *kanda*, a sort of silver chain, round their waist. The use of ornaments in respect of males is slowly disappearing and now the only ornaments used by males are a chain, a gold ring and at times a watch strap made of gold.

Female ornaments generally were of two types ; one for daily use and the other for occasional and ceremonial wear. Ornaments prepared for occasional wear were usually kept in a brass casket known as *karanda*. Ladies belonging to the higher strata of society usually

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[1] A sort of gold embroidered sari.

have more than one such *karanda*. It was customary for the poorer sections of the society to borrow those ornaments for ceremonial wear, as to attend ceremonies without any sort of ornaments was considered a bad omen.

At the beginning of the current century, ladies were using a number of ornaments. These ornaments have slowly disappeared and have given way to new types. However, the list of ornaments used then would be of interest even now.

Of the head ornaments, the one that was worn usually was *gulki* and was mostly used by grown-up ladies. Ornaments meant for occasional wear comprised *gulabphul* (rose flower), *Shevtya* (chrysanthemum flower), *champha* (golden champo), *champhyanchi Fati* (golden champo flowers strung together), *kadkade*, *salkan* (lotus flower), *salkanchi fati* (lotus flowers strung together), *suranga* (ochrocarpus Longifolius), *surangavalesar* (suranga flowers strung together), *pisoli* (two ornamental birds held together by a number of golden chains), *Kegadanchi Fati* (screw pines strung together), *turo* (bunch of different flowers), *kuttaro* (ornamental bird) and *gonde*.

Chandracor and *tilo* were the ornaments worn on the forehead. Different types of ear ornaments were in vogue. Those worn usually were *vedi* (*cudi*), *kalaphura*, *battu* (buttons), balayo and *ghum*. Usually four holes were pierced in the ear and four different types of earrings were worn. Those ornaments for usual wear composed of *pilli* and *chamki*, while those for occasional wear comprised *natha* and *vali* Gavdas usually wore an ornament known as *dando*. Ladies generally used different types of necklaces known as *galsari*, chains, etc. Occasionally they put on different types of necklaces made of sovereigns and such other coins, besides chains with different designs known as *mohanmal*, *pavalyanchimal*, etc. On the arms they wore ornaments known as *pykhuryo*, *ela*, *bazuband*, *dandakade*, etc For the wrist they wore *bangadyas*, *gotha*, *patlya*, *tode*, etc. For fingers, use of rings was very common. Foot ornaments comprised *gujareja*, *wade*, *tode*, *zanzar*, *etc*. Usually, these ornaments were prepared of silver.

Before the Portuguese Civil Code allowing females to claim their share of their father or husband's property came into force, women were entirely dependent on their father, husband and son. In order to lessen their dependency, large gifts of gold ornaments were made to her at the time of her marriage both from her parents and her in-laws. Thus, if she was widowed at an early age or had no son, she would be able to fend for herself and could lead an independent life.

Food.—Rice is the staple food of Goa Hindus and of all sections of the community in Goa. It is used in two forms : *ukda* (par boiled), made of paddy half boiled before it is pounded to remove chaff ; and surai, made without boiling the paddy. Two processes are generally followed in the preparation of boiled rice ; one known as *betha-bhat, is* prepared by boiling the rice in about twice the quantity of water till it swells soft ; the other kind known as *velana bhat* is boiled in excess quantity of water and then strained dry when the grain gets sufficiently soft. Most of the people, excepting those belonging to the higher strata of the society, consume boiled rice.

About thirty to forty years before, it was not customary to take any breakfast and people used to take *pej* (gruel). The poorer sections of the society took it with salt fish or salted raw mango. The richer sections of the society took it with *khatkhate,* a sort of mixed vegetable dish. Even now, it is customary among the poorer sections of the society to take *pej* or *ambil* prepared of *nachani* (*nachani* flour boiled with water). However, the younger generation amongst them has taken to drinking tea. The working class has to take its bieakfast in hotels and restaurants and their breakfast usually consists of vegetables and bread.

Among the higher strata of the society, they usually take a cup of tea in the early morning followed by breakfast by about nine o'clock. Their breakfast consists of different types of vegetables taken with bread or un-leavened bread prepared from wheat. Lunch is usually taken between twelve noon and two o'clock. Principal items on the lunch menu are rice - strained rice, fish curry (*nustyaschi kodi—human*) or split pulses along with salt dry fish or salted raw mango. It is also customary to drink *nival* (strained rice water). Even among the higher strata of society rice and *kodi* form the main items for lunch. However, there are a number of persons who are strictly vegetarians. Those belonging to Dravida Brahmins and priests among Saraswat Brahmins are purely vegetarians. Vaishnavas among Saraswats were strictly vegetarians a few years before. However, they have also started consuming fish of late. Among the higher classes they do not take animal food on particular days and on that day they take rice with split pulses mixed with condiments and spices. It is known as *ros.* Many a time they prepare *toya* or *amati* generally prepared of split pulses spiced with *masala,* and *phodony* i.e. a peculiar manner of seasoning or addition of spices heated in oil. They use either chutney, mixed salads, pickles or *papad* as a side-dish. Due to the acute shortage of milk products in the district, it is not customary to take butter milk. Instead they use *kokum* curry, pure or mixed with coconut juice. Dinner

is taken between eight and ten o'clock at night and the menu does not differ much from the lunch menu. On fasting days, people do not take rice at all and use *varai* or wheat instead. Since Liberation, the food habits of Goa Hindus have also undergone a slight change and now they consume a bit of wheat and milk and milk products. Consumption of fish has gone down. Though people use fish freely they rarely consume meat. Many persons do not consume garlic and onion during feasts and festivals.

Different types of sweet dishes are prepared on festive occasions. On every Sunday in the month of *Sravana* (July/August) sweet dishes are prepared in the following order : On the first Sunday they prepare *modak* (boiled rice flour stuffed with shredded coconut and *gur*); on the second *patole*; on the third, sweet rice mixed with coconut and molasses and on the fourth, sweet *polas* (pancakes). On the day of *makarsankrant* that is, the day the sun enters *makar* the zodiac sign of Capricorn, they prepare *sanna* (steamed rice cakes with rice mixed with *udid*). On the bright 5th of *Sravana*, that is nagapanchami, they prepare *patole*. On Ganesh Chaturthi, that is, the bright fourth of *Bhadrapad* they prepare *modak* and *karanjya* or *nevryo* (wheat flour stuffed with shredded coconut, fried). They prepare unleavened bread of wheat mixed with split pulses gram on *Phalgun* full moon day, i.e. Holi. *Waddas* prepared from wheat flour and different types of pulses form the principal dish for the festive occasions. Another favourite of Goa Hindus is *sakar-bhat* (sweet rice). However, *sakar-bhat* has given place to *bundi ladu* (sweet balls prepared from gram flour) and *jellebies*. Many a time they prepare *pius* i.e boiled milk added with sugar and rice or sugar and *sabhudana*.

Since Liberation, the number of hotels and restaurants in the district has increased and a majority of the increased numbers are *udipi* (South Indian) hotels and restaurants. The number of persons visiting hotels and restaurants since Liberation has also increased. Formerly, they used to take in the restaurants, vegetables with bread or plaintains with unleavened bread. These eatables have given way to *idli sambar* and *masala dosa*. It may be mentioned here that the manner of taking food of the Goa Hindus is similar to the one that is found in Maharashtra while the impact of Karnataka is traced on the food items, particularly *sandhan*, *idli* and *pole* which have its roots in Karnataka.

Fairs, Festivals, Holidays, Vratas and Fasts.—As is witnessed in the rest of the country, Goa Hindus also observe some religious fairs, festivals, holidays, *vratas* and fasts. Of these, some are in respect

of individuals, some in respect of families, some social and some connected with temples. All these different types of fairs, festivals, *vratas*, etc., are observed in Goa throughout the year.

Gudhi Padva.—Like other places in the south, the New Year of the Goa Hindus begins on *Chaitra Pratipada* known as *Gudhi Padva*. This is the first and important festival of the year. The day is considered as one of the three and a half *muhurtas* that is, days considered most auspicious to start any new work or undertaking or any auspicious events. In the morning, all members of the household take a refreshing oil bath and put on new clothes. A bamboo staff with coloured silk scarf and a bright goblet atop, is worshipped and garlanded and erected close to the front door. A concoction of tender neem leaves flavoured with black pepper is partaken of as *prasad* on the occasion. It is followed by a feast in the afternoon.

Ramanavami.—The festival of Ramanavami falls on the 9th day of *Chaitra* (March/April) as on this day at twelve noon, was born Shri Ramchandra, the Divine Hero of Ramayana. Though the main worship of the deity takes place at noon, the devotees observe fast throughout the day.

Hanuman Jayanti.—Hanuman Jayanti is observed on the full moon day of the month of *Chaitra* as it is the birth anniversary of the God Hanuman.

Akshaya Tritiya.—Falling on *Vaishakha Suddha* 3, this day is considered as half of the three and a half *muhurtas* on which any new work or ceremony can be undertaken without referring to an almanac. The day is also considered as a day of commemorating one's dead ancestors by making to them offering of *til* (sesame), water and cooked food.

Naga Panchami.—The bright 5th of *Sravana* is observed as *Naga Panchami* when in many a Hindu house, a clay *naga* (cobra) is worshipped and the feast enjoyed. Operations like digging and ploughing which are believed to hurt snakes are particularly suspended on the day specially in rural areas.

Sutachi Punav.—*Sutachi Punav* is also known as *Narali Paurnima* or Coconut Day. On the full moon day of *Sravana* comes *sutachi punav*. The day is celebrated by worshipping threads prepared of cotton yarn. These threads are worn like the sacred thread worn by brahmins.

Gokul Ashtami.—*Gokul Ashtami* is a festival also observed as a *vrata* with a fast on the 8th day of the dark half of *Sravana* in commemoration of the birth of Lord Shri Krishna, the 8th Reincarnation of Lord Vishnu. In many of the temples dedicated to Shri Krishna, the Lord is put in a cradle at midnight, the time of his birth.

Ganesh Chaturthi (*Chavath*).—One of the most important festivals observed by Goa Hindus is that of Ganesh Chaturthi. It comes on the bright 4th of *Bhadrapada* and is observed as the birth anniversary of Lord Ganesh, the God of Wisdom and of all auspicious beginnings. Of all the days set aside for the worship of Lord Ganapati, the 4th day of the bright half of *Bhadrapada* is the principal day dedicated to the worship of Lord Ganesh and his mount, the Mouse. The beginners started their learnings in the old days, with a bow of obeissance to God Ganapati in the terms, "*Shri Ganeshayanamah*" meaning, I bow to God Ganapati. Worship of Ganapati is obligatory at the beginning of any worship.

In Goa, the festival is generally celebrated for two and a half days and has got the importance that Durga Puja has in Bengal, Onum has in Kerala and Diwali has in the rest of the country. Worship of Mahadeva, the father of Lord Ganesh, painted on a piece of paper and a coconut considered as Mahadev is perfomed. *Suwasinis* observe fast during the day. Earthen coloured images of Ganapati are usually brought the day prior to the festival. As in the case of other festivals, all members of the household wake up early in the morning and after ablutions take a refreshing bath and set themselves to the task of making elaborate preparations for the worship of the deity which takes place at noon. In this case it consists of fetching flowers (red varieties being preferred), ferns and tip-leaves of twenty-one kinds and 'Durva' (grass shoots) in lots of 21, which number is very important in the worship of this deity, and other prescribed materials. This done, finishing touches are given to the reception hall where the Ganapati image is to be received and installed with a decorated dais surmounted with an ornamented arch overhung with rows of fruits and flowers, known as '*Falavali*' (*Matoli* or *Matali*) and most important of all, the fetching and installing of a well-sized earthen coloured image of Ganesh and worshipping it under the guidance of a priest at mid-day and offering prayers in his praise (*Arati*). However, it may be mentioned here that due to the limited number of priests in many households, *puja* is performed by the head of the family, from *pothi*, the sacred religious book that gives the hymns to be chanted as also the procedure to be followed during the worship. The principal food offering (*naivedya*) to the deity consists of a sweet preparation called '*modak*'. Twenty-one such '*modaks*' are served to the deity in a leaf plate alongwith the other normal articles of food. During prayers *Aratis* are sung to the accompaniment of musical instruments. The usual *Arati* sung is *sukhkarta-dukhaharta*, etc. However, in many Goa Hindus houses the one *Arati* (prayer) that is popular is "*Ganaraj, Gajanan, Sindhu Anandacha*" and is sung invariably.

It may also be mentioned here that it is customary in a few of the Goa Hindu houses to worship a painted picture of Lord Ganesh on a piece of paper instead of an earthen image. This tradition can be traced to the institution of the Inquisition established in Goa by the Portuguese. The Portuguese imposed restrictions on the religious observances of the Hindus and it became necessary for the Hindus that there should not be any publicity to any Hindu religious ceremony. In case of an earthen image of Lord Ganesh, it was essential that the same should be immersed in water, in the sea or a well, etc. Then the Hindus started worshipping a picture of Ganapati instead of an earthen image. The worship of a picture of Ganapati is confined to the talukas of Tiswadi, Bardez, Salcete and Mormugao in the Old Conquests. This system is slowly waning out and is restricted only to a limited number of families.

It is customary to consign Ganesh images installed in different houses to water, by carrying them in procession to the accompaniment of prayers, songs and music and emitting sounds exhorting the deities to grace the devotees with its early arrival next year. Immersion of the idol usually takes place in Goa on the second day, though in rare cases the immersion takes place on the 5th, 7th, 9th and 11th day. Till immersion, the image of Ganapati is worshipped every morning and evening and *Arati* (prayers) are offered. Prior to taking out the image for immersion, a special worship known as *Uttar Puja* is performed praying for the deities blessings and entreating it to grace the household by its august presence early next year. During the festival it is customary for the people to go to each other's houses at the performance of *Arati*, offering prayers in praise of the deity. It is customary to pay a visit to at least five households. During the festival a display of fireworks takes place. The festival is of such importance in Goa that the Christians in Goa visit their friend's houses and wish them a happy Ganesh. The institution of public Ganesh celebrations started about sixty years before by the late Lokamanya Tilak is gaining popularity slowly since the liberation of the territory. Public entertainment programmes, besides instructive lectures and discourses, *bhajans, kirtans,* etc., are arranged on the occasion. The principal sweetmeat prepared on the day of the Gauri worship is *patolya.*

Vijaya Dashmi or Dasara (*Dassera*).—The Dassera, so called from *dasha* (ten) and *ahar* (*days*) is a ten day festival in honour of the Goddess Durga, the final day celebrated on the 10th of bright *Asvina* could be considered as the culminating ceremony of *Durgotsava.* On the morning of this day, all the members of the family take an early bath and worship their religious books, iron weapons and tools and

household goods. The students worship the picture of Saraswati, the wife of Ganapati and the Goddess of Learning. After having sumptuous meals in the afternoon, towards evening they don ceremonial attire and exchange greetings with one another presenting *shami* (prosopis spicigera) or *apta* (bauhinia racemosa) leaves which are supposed to symbolise gold on that particular day. The day is considered as one of the three and a half most important *muhurtas* for undertaking any new work or business.

Diwali.—The festival next in importance only to Ganesh is that of Diwali, the festival of lights. During the period, each morning and evening, a number of *pantyas* (small earthen oil lamps) are lit in all frontages of the house and in every nook and corner inside. In many cases nowadays, electric lights have replaced the old *pantyas*. Prior to the liberation of the territory, the second, third and fourth day of Diwali, namely, Lakshmi Pujan (worship of the Goddess of Wealth), Padva, first day of the bright half of *Kartika* and New Year Day for those observing Vikram Samvant celebrated occasionally by the merchant class in particular, and *bhaubij* (second day of the bright half of *Kartika*) were not celebrated to a great extent by Goa Hindus. Lakshmi Pujan is ceremoniously performed mainly by the merchant Hindus in their shops and offices. *Padva* or *Bali Pratipada* is mostly celebrated by Gavdas and other agricultural classes. A miniature cattle shed of cowdung is made and worshipped in the household cattle shed placing therein, *karata* fruits, mounted on four small sticks which represent cattle. The cattle are honoured, worshipped, decorated and fed on *pole* in the morning, and this is the only day in the year that cattle are honoured in this manner. Young Shepherd boys move from place to place carrying on their heads a wooden idol of Lord Gopal Krishna. This day is particularly celebrated in the temple dedicated to Devaki-Krishna at Marcela. This system is particularly witnessed only in the New Conquests. *Bhaubij* was hitherto unknown to Goa Hindus. They have started celebrating *Bhaubij* since Liberation. As compared to the other parts of the country where Diwali is mainly celebrated for four days, in Goa it is particularly celebrated only on the first day and that is on the 14th day of the dark half of *Asvina*. On the night of the 13th day of the dark half of *Asvina*, people generally do not sleep and in the early morning of the 14th of the dark half a huge effigy of Narkasur of dry grass stuffed with crackers, is made. After the burning of the demon, people return home, take a scented oil bath to the accompaniment of lighting of crackers and then crush under their feet the bitter *karata*, a diminutive wild cucumber in token of killing of Narkasur. After bath, all the members of the family along with friends and relatives take breakfast

and the main items on the breakfast menu are prepared from rice flakes (*phov*). Before they take breakfast all the unwidowed women in the family wave lighted lamps around the heads of the male members of the family and it is necessary for the male members to give them some sort of present at the time.

Shigmo (*Holi-Shigma*).—Holi is one of the public festivals of Goa and is known as *Shihirotsav*. Two types of Shigmo festivals, one known as *Dhakto Shigmo*, a festival of lesser consequence and the other *Vodlo Shigma*, of greater consequence, is celebrated in the district. It is generally observed that *Dhakto Shigmo* is celebrated by agriculturists, labour class and rural population, while *Vodlo Shigmo* is celebrated by all the classes coming together.

The festival of *Dhakto Shigmo* commences five days prior to the full moon day of *Phalguna* and ends on the full moon day, in the Old Conquests. In the New Conquests, *Vodlo Shigmo* is mostly celebrated and it commences with Holi *Paurnima* (full moon day of the month of *Phalguna*) and continues for five days. However, people kindle Holi fire either on the full moon day of the month or on the next day. The feast is observed on that day and the principal item of food is unleavened bread stuffed with gram flour and *gur*. On the first day of the festival, people in the village assemble at a fixed place and sing in chorus, a song known as *naman*. They also sing songs known as *jot* and perform a folk dance known as *talgadi*. From the second day onwards, people move from door to door dancing to the sound of *dhol*, *tasha*, etc., with a plate in their hand and wherever they go, some money is placed in the plate. After some money is put, they sing a song wishing the donor. These songs are known as *tali*. On the last day of the festival, a spirit is supposed to have entered these persons who dance and this is known as *gade padne*. In many of the villages, some boy is dressed in the attire of a bridegroom with leaves of the mango tree tied around his head and is taken in procession through the village. After the procession is over, they take a collective bath and the festival comes to an end. It is known a *Mand Thevane*. The festival of *Dhakto Shigmo* can mainly be considered as a festival of folk songs and folk dances.

Vodlo Shigmo is considered as a festival to be performed in the village temple. The festival is not celebrated in all the temples at one and the same time. It is celebrated on different dates in the month of *Phalguna*. The principal days of these celebrations are the first and second known as *hendope* (*handane*) and *dhulvad*. On the first day of the festival the village deity is bathed and is dressed in saffron robes. After the *mahanaivedya* (offering of food), the feast takes place.

For the ceremony, a *mandap* (a temporary shed) of palm leaves is erected in which the two big *samais* (brass lamps) are lit in the evening and a song known as *chandraval* is sung to the accompaniment of *ghumat* and other musical instruments, for about three hours. Thereafter takes place a palanquin procession of the deity. Formerly, dances used to be performed by the temple dancing girls. However, the system is not in vogue at present.

On the day of *dhulvad, gulal* (red powder) is showered on one another. The festival of *gulal* at Zambaulim is very popular in Goa. It is held in honour of Damodar, the village deity of Margao and it commences on *Phalguna vadya saptami* (7th day in the second fortnight of *Phalguna*) and ends on *Phalguna vadya chaturdashi* (14th day of the latter half of *Phalguna*). The ceremony of *gulal* invariably takes place on Tuesday. On the preceding day and on Tuesday, a feast is given to about twenty-five thousand people, the principal item of food being *sakar bhat*. It has been celebrated since, 1927 at the instance of *Matha Gramastha Hindu Sabha*.

Festivals celebrated in different temples.—In Goa a number of festivals are celebrated in different temples all the year round. In some temples, a palanquin procession of the deity takes place on a fixed day, every week or fortnight. Besides palanquin processions as mentioned above, various festivals such as *Ram Navami, Gokul Ashtami, Dahi Kala, Dhanurmas, Anant Chaturdashi, Vasant Puja, Jai Puja*, etc., are celebrated in different temples.

Vasant Puja is celebrated in different temples during spring. On the occasion, offerings of seasonal fruits are made to the deity. In some temples, *Jai Puja*--worship of the deity with jasmine flowers, is performed on particular days during the rainy season. The entire temple is decorated with *jai* flowers, the atmosphere being full of sweet fragrance. This festival is particularly celebrated in the temple at Mardol as the village is considered to be the supplier of these flowers. Worship with jasmine flowers is being celebrated for about the last sixty years and the local tradition ascribes it to a vow when about sixty years before, a number of deaths took place due to an unknown disease.

Christians

Catholics are generally fond of well-ventilated houses which are ordinarily kept clean and well furnished and decorated. Originally the European priests who changed the local habits and customs of the Christians, provided them with models for their houses, that is how their houses are mostly in baroque style. Thus the landlords (*bhatkars*) have built spacious mansions for their residences, with a *balcão* (out-

side parlour), an entrance, a smoking hall, a dining hall, many living rooms, store rooms, kitchen and out-houses. They are furnished with richly carved sofas and easy chairs in the Continental style, and are well decorated sometimes with China plates, etc. Other people imitate these huge mansions and build their houses, provided generally with a *balcão* or verandah, *entrade, sala, refeitorio, cozinha,* etc. But the habitations of the *mundcars* or tenants consist of very small mud-houses, which they try to keep as clean as possible.

Dress.—The Christians in the district dress in Western manner; only the women of the labour class don a kind of sari called *Kapodd.* In the old days some high-class women wore *pan-baju,* a kind of Malayan dress, or a *vol* which covered the upper part of the body in a kind of conch or egg shell. But these modes of dresses have now been discarded in favour of the traditional Indian sari or European *vestido* or frock.

Christian males nowadays wear pants and bush shirts. A few years ago it was the practice to use complete suits consisting of pant, shirt, tie and coat. Even now, for wedding receptions, funerals and on feast days, Christian gents use dark cloth suits with tie and ladies wear either dress or sari, with shoes on the feet. It is not considered proper to don bush shirts on such occasions.

Food.—Christians are all non-vegetarians. Their staple food consists of rice, generally boiled rice, curry, fish and meat. The consumption of vegetables is poor or lower than that what is normally required for a balanced diet. There is a slight difference between the Indian culinary method and the preparation of Goan dishes, thanks to certain changes introduced by the missionaries. The liberal use of vinegar for the preservation of fish and meat and in cooking is one such distinctive feature. Similarly, the preparation of cakes with plenty of eggs and special sweets like the very rich *bebinca, sandnans* or *idli* (leavened with toddy) is another distinct feature.

Christians from Goa generally eat rice and curry with fish in the afternoon and at night. In the morning they have tea with bread or *bakri, kailori* or *polli* baked at home, at about 9-00 a.m. *canjee* (gruel) of rice. Once a week or on festive occasions they have meat and vegetable dishes. Town people generally take meat everyday, either beef, pork, mutton or chicken. Condiments are freely used for such dishes. Special sweets prepared in Christian homes are cakes, *bebinca, dodol, manddare, kornbolam, nevreo, boje,* etc. Most of these sweets are prepared at Christmas time. Christians generally sit at tables, as they are not used to squatting on the floor.

Music.—Although Christians are conversant with Western music, the common folk compose their own songs in borrowed tunes from both

Eastern and Western music. There are special types of songs, such as *Mandos* followed by *Dulpods*, which were originally composed and sung by Brahmin families from Curtorim and Loutolim and *Deknnis*, which have pronounced Indian accent. Except for this, Christians do not understand or appreciate classical Indian music.

COMMUNAL LIFE

Hindus

Pilgrinage.—People in Goa undertake pilgrimage of Pandharpur (Sholapur district in Maharashtra State), Narsobawadi (Kolhapur district in Maharashtra State), Tirupati (Andhra Pradesh State) and Gokarn Mahabaleshwar (North Kanara district in Karnataka State). It was customary to name the grandsons as Vyankatesh and Mahableshwar after taking a pilgrimage. On return from the pigrimage a worship is performed known as *mavande* and *prasad* (consecrated food) is distributed to friends and relatives.

Fairs.—Fairs are held in almost every temple in Goa. The duration of the fair varies from one to five days when a number of *mahajans*—those persons whose family deity the temple deity is, devotees and villagers, make it a point to attend the fair. These fairs generally are of religious as well as social significance. The religious ceremony consists of *abhisheka* (ceremonial bath), *mahanaivedya* (offering of food to the deity) and *Samaradhana* (distribution of food to the assembled). *Samaradhana* is also known as *ufar* i.e. *upahar* (light refreshment). During these days, in the temple are held *puran* (religious discourses), *kirtans* (religious discourses accompanied by devotional songs) and *arati* (waving of a platter containing a burning lamp around the idol and singing a prayer in favour of the deity). Unwidowed married women go around the temple with earthern lamps on their head. During the fair, the procession of the deity takes place, seated in *palakhi* (palanquin), *lalakhi* (a large dome-shaped palanquin with legs), and a chariot. Chariots are of two types. One with wheels and the other without wheels. The one without wheels has arms on both sides and it is carried on the shoulders. The chariot ceremony of the first type is held at Partgal on Ram-navami, while at Marcaim, the procession of the goddess takes place in the second type of chariot.

All these fairs have commercial importance too. when a number of stalls selling sweetmeats, brass, copper, and stainless steel utensils, toys, ropes, flowers, earthern ware, etc., are set up. The total turnover exceeds a thousand rupees. Formerly it was customary to have gambling dens at the time of the fair. However, this is wearing away.

No fair can be complete without staging a drama. Before the emergence of dramas, there used to be *dashavatari* plays. Goans being

fond of music in general, musical dramas are generally staged on the occasion.

During the fair at Sirigao, some devotees walk over live charcoal. At the fair at Canacona, three persons sleep with their heads together and their feet pointing in three different directions. On their heads is kept an earthen pot under which a fire is lit and rice is cooked. On the head of a fourth person, an incision is made with a sword and the blood that oozes out is mixed with the rice being cooked and this is offered to the god and then scattered all around.

Besides fairs, *kalas* take place in different temples when are usually staged, *dashavatari* plays. Though the word *dashavatari* is used, all the ten incarnations of Vishnu are never depicted. The principal characters depicted are those of Ganapati, Saraswati, Brahmadev, Shankhasur and Vishnu. On the next day of *kala* is held *dahi kala* or *gavlan kala*. During the occasion is depicted the childhood of Lord Krishna. After the performance of the show, *prasad*—consecrated food, is distributed to those present

Vratas.—*Vrata* in its broadest sense means a vow. Vows are observed in religion either as an obligatory performance on specified occasions or performed by an individual for his own benefit to gain particular ends, whether material or spiritual. *Vratas* impose a certain amount of self-restraint as in the case of fasts.

The religious festivals have an element of '*vrata*' in them in the sense that the person observing the festival has to perform some religious rites entertaining a resolve (*Sankalpa*) to perform them and in that sense all religious festivals are primarily *vratas*. Some *vratas* such as *Maha-Ekadashis*, *Maha-Shivratri*, *Vata-Savitri*, *Haritalika*, *Rishi Panchami*, are however, observed more as days of dedication and devotion to deities for the purpose in view and so we term them simply as *vratas* as against festivals in which the element of gaiety predominates over the sense of religious piety.

The performance of some ceremonies is restricted to the orthodox, specially to women. A number of orthodoxy observe fast on *Vinayaki Chaturthi* (the 4th day of the dark half of every month). Some observe fast only on *Chaturthi* falling on Tuesday, known as *Angariki Chaturthi*. During these days people observe fast during day time and dine after moon-rise. Formerly it was customary to observe fast on *Ekadashi*, that is on the eleventh day of every fortnight. Sometimes the *Ekadashi* falls on two consecutive days at which time the *smartas* observe the first while the *bhagvats* observe the second day. Though nowadays people do not observe fast on the day of *Ekadashi* every month, many of them do observe it on the eleventh day of *Ashudha* and *Kartika*. The *vrata* of Satya Narayana is observed by almost all

Hindus in Goa. The Satya Narayana Puja (worship of Satya Narayana) takes place before undertaking any auspicious ceremony or at least once a year. Some people perform worship of Satya Narayana as a vow made for fulfilling their cherished desires.

Some of the *vratas* are restricted to women only. On *Vata Savitri* day, that is on the 15th day of the bright half of *Jyeshtha*, women whose husbands are alive, fast the whole day and worship the *vata* (banyan) tree. The day is observed with a view that their husbands should live a long life and they should be *suhasinis* throughout their lives. On the third of the bright half of the month of *Bhadrapad* women worship a portrait of Gauri and a coconut considered as Mahadev. This particular *vrata* is observed by almost every married woman with a view to getting a male issue. On every Sunday in the month of *Sravana*, ladies worship a model of the sun prepared out of palm leaves and placed on a *pat* (a low wooden stool), with seasonal flowers and leaves. In the evening it is put in *tulasi vrandavan* or is immersed in a well. On the *Makara Sankranta* day, women worship a *sugada* (two earthen pots tied face to face, one of which contains some corn and *kunku* and turmeric powder) and present it to a brahmin. The vow of *Sola somvar* sixteen Mondays, that is, observing fast for sixteen consecutive Mondays, is observed by a number of women and on the 17th Monday, a feast is arranged when *prasad* (consecrated food) is distributed to those present.

Games.—Games played by school-going children and non-school-going children differ. In the play activities of infancy and early childhood, toys like rattles (*khulkhulo*), pipes, whistles, drums and tambourines are found very fascinating. These toys are generally followed by the doll, a close rival of the set of toys mentioned earlier, which is by far the most popular toy particularly among girls upto the age of eight or nine and sometimes even later. When children start walking, they enjoy toys on wheels like carts and it is a common sight to see small children going about their houses dragging behind them a toy vehicle attached to a string. Thereafter comes a stage when children play various roles like that of cart-men, horse-driver, musical player, palanquin bearer, etc., which are generally enacted with fidelity to real life. They also imitate their teachers while playing that role. Between the ages of five and nine the children enjoy those games that call on them to run around and exert themselves to the fullest. Hence simple chase and tag, *dharchyani khelap*, *lipchyani khelap*, game of hide-and-seek, and such others are very popular. Games of *gotya* (marbles), *bhomvra* (top), *patanga* (kite), have a great attraction for boys at the age of six to sixteen. Playing of *kaji* (cashew-nut), wherein boys contest with cashew nuts put in a line by hitting them

from a distance with a *bhotto* (big and heavy cashewnut), is a popular game in the district. *Bhatukli* is the game of housekeeping played often and enthusiastically by girls particularly in the age group of six and twelve, with secondary roles given to boys..

Generally school-going children play team games such as *kabaddi, hututu,* kho-kho, throw-ball, basket-ball, baseball, football, hockey, cricket, etc. By far the most popular of these games is football.

There are a number of Recreation Clubs and Sports Associations in the Goa District. A list of some of the important State level associations is given below :

1. All Goa, Daman and Diu Basketball Association, Panaji.
2. All Goa, Daman and Diu Boxing Association, Panaji.
3. All Goa, Daman and Diu Chess Association, Panaji.
4. All Goa, Daman and Diu Judo Association, Panaji.
5. All Goa, Daman and Diu Tennikoit Association, Panaji.
6. All Goa, Daman and Diu Yoga Vijayam Association, Panaji.
7. Folk Dance Association, Saligao.
8. Goa Amateur Athletic Association, Panaji.
9. Goa Badminton Association, Panaji.
10. Goa Cricket Association, Margao.
11. Goa, Daman and Diu Billiards and Snookers Association, Mormugao.
12. Goa, Daman and Diu Billiards and Snookers Association, Vasco-da-Gama.
13. Goa, Daman and Diu Body Building Association, Sanguem.
14. Goa, Daman and Diu Carrom Association, Mapusa.
15. Goa, Daman and Diu Contract Bridge Association, Panaji.
16. Goa, Daman and Diu Cycling Association, Ponda.
17. Goa, Daman, and Diu Gymnastic Association, Panaji.
18. Goa, Daman and Diu Hiking Association, Panaji.
19. Goa, Daman and Diu Schools Sports Association, Panaji.
20. Goa, Daman and Diu Shooting Association, Panaji.
21. Goa Football Association, Panaji.
22. Goa Handball Association, Panaji.
23. Goa Kabadi Association, Panaji.
24. Goa Kho-Kho Association, Vasco-da-Gama.
25. Goa Men Hockey Association, Mormugao Harbour.
26. Goa State Lawn Tennis Association, Margao.
27. Goa Swimming Association, Panaji.
28. Goa Table Tennis Association, Margao.
29. Goa Vollevball Association, Goa Velha.
30. Goa Women Hockey Association, Mormugao Harbour.
31. Goa Wrestling Association, Vasco-da-Gama.

32. Goa Yachting Association, Panaji.
33. The Goa Referees Association, Panaji.
34. Goa Weightlifting Association, Sanguem.

The Christians of Goa are not very orthodox in the matters of religion and communal life. Leading figures among them, such as Bernardo Francisco da Costa, Dr. Francisco Luis Gomes, Bernardo Peres da Silva, Luis de Menezes Braganza, Antonio de Noronha, have sponsored liberal causes and campaigned for free thinking. Others like Dr. Tristao de Braganza Cunha, Dr. Júliao Menezes, Fr. H. O. Mascarenhas have pleaded for the renaissance of culture by projecting the Indian civilisation and have fought for Goa's freedom and integration with Mother India. As a result, many of the elite of the Christian community are today free-thinkers and do not profess any religion.

Although Konkani is the mother-tongue of Christians, many of the educated class speak Portuguese and English at home and in their social circle. There are families even in the villages who speak only Portuguese at home. Those who speak these foreign languages do not attach importance to their mother-tongue. But the common people read and write Konkani in Roman script, in which there are at least a dozen periodicals published from Bombay and Goa.

Christians

Fairs and Festivals.—Christians have generally a church in almost every village of the four talukas of Salcete, Mormugao, Tiswadi, and Bardez. In other talukas too, there are many churches but not in the same ratio. There are ordinarily three or four feasts celebrated in each village in honour of various saints in the course of the year, in addition to Christmas (birth of Jesus) and other solemn events of the Lent (connected with the persecution and death of Jesus). There are places of pilgrimage which attract Christians from all over Goa, such as the shrine of St. Francis Xavier at the Basilica of Bom Jesus at Old Goa, the Chapel of Jesus of Nazareth at Siridao beach, the Church at Linhares near Aguada Fort, the Church of Reis Magos at Verem and the tomb of Fr. Agnelo at Pilar. To the firs names, where the body of the Saint is exposed periodically, come pilgrims not only from distant parts of India, but from countries abroad too.

The main festivals of the Christians are the New Year's Day on the 1st of January, the three days of Carnival preceding Lent which falls in February or March and sometimes in April. Easter and Christmas. Carnival is decried by the Church, nevertheless, it is celebrated with pomp, fun and frolic to let out the rigour of pent up inhibitions and the drudgery of over exercised life. On such occasions, dances are

held by social clubs and *khells* or peripatetic *tamashas* or plays performed by the toddy-tappers and *kunbis*, to the amusement of the entire population.

Catholic religion follows the same pattern all over the world. The main tenet is the belief in God, i.e. the Holy Trinity of the Father, Son and the Holy Spirit. God the Son came to earth in the person of Jesus Christ, son of Virgin Mary. Most of the feasts are dedicated to Jesus' birth and is celebrated on 24th December at mid-night and the festivities continue right into the New Year on 1st January and the Magi Kings' Feast on 6th January. Later, there is a period of Lent (*Quaresma*), which ends with Good Friday (commemorating the death of Christ on the cross) and Easter, projecting the resurrection of Christ. The Ascension of Christ into heaven is also celebrated. Similarly, on 24th June, the feast of St. John the Baptist, the precursor of Jesus, is celebrated.

The cult of Mary takes various forms. She is known under different invocations such as Our Lady of Immaculate Conception (with the feast on 8th December in various places), Our Lady of Miracles (with the feast at Mapusa), Our Lady of Perpetual Help, Our Lady of Good Voyage, Our Lady of Sorrows, etc. All the year round there are feasts in honour of Mary under different invocations in different churches.

Once a year, after Easter, the parish priests visit the houses of the parishioners, and bless them with holy water. Boys can take to priestly life, in which case they have to undergo about 14 years training in the seminary and are not allowed to marry. Girls can take the vows of poverty, chastity and obedience and become nuns.

Christians exercise almost all the professions and trades. Besides agriculture, toddy-tapping and baking of bread, they work in Government offices and commercial establishments. Comparatively, few Christians have taken to industry or commerce. Christians improved their economic status by emigrating to big cities in India and to countries abroad, specially to Africa and South Arabia. They worked as cooks, saloon crew on board the ship and in big hotels and also as musicians, accountants and clerks.

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CHAPTER 4—AGRICULTURE AND IRRIGATION

AGRICULTURAL POPULATION

Agriculture still continues to be the main occupation of the inhabitants of the district. As per the census of 1971, as many as 1,09,311 persons out of a total of 2,54,475 enumerated as total workers were engaged in agricultural pursuits.

AGRICULTURAL SEASONS

Most of the crops in the district are dependent on monsoons. The monsoon crops are called the *kharif* or *sorod* crops and the winter crops are called *rabi* or *vaingan* crops. *Sorod* crops are raised on rains from the south-west monsoon while *vaingan* crops are grown with the help of irrigation and occasional fair weather showers occuring in September-October and occasional rains from pre-monsoon showers in May. *Sorod* crops are sown during the period from the first week of June to early July and harvesting is done in September-October. *Vaingan* crops are sown during the period from the first week of November to the second week of December and are reaped in March.

Crops grown in the *kharif* (*sorod*) season consist of Paddy, *nachani*, etc., while the crops grown in the *rabi* season are composed of paddy, pulses like *kulith* (horse gram), *udid*, (black gram), *tur* (pigeon pea) and a variety of beans.

LAND UTILISATION

In the absence of any cadastral survey of the area and of the system of primary reporting of agricultural statistics, it is not possible to build up the land utilisation and crop pattern data yearwise. However, the following statement worked out in the year 1961 based on the data of the cadastral survey carried out between 1904 and 1940 in some parts and the data of photographic survey carried out in 1961 in other parts will give a broad idea of land used and crop pattern.

(Area in hectares)

Serial No.	Items	Goa (Land Utilisation)
1	Total Geographical area	3,61,113.6
2	Area under forests	1,05,294.8
3	Land not available for cultivation —	
	(*i*) Land put to non-agricultural uses	19,701.3
	(*ii*) Barren and uncultivable land	13,456.6

Serial No.	Items	Goa (Land Utilisation)
4	Other uncultivable land including fallowlands —	
	(*i*) Permanent pastures and other grazing lands	1,304.9
	(*ii*) Land under miscellaneous tree crops and groves not included in net area sown ..	580.3
	(*iii*) Cultivable waste	92,367.2
5	Net area sown —	
	(*i*) Food crops	68,629.2
	(*ii*) Fruit crops	59,800.2
6	Gross cropped area	
	(*i*) Net area sown	1,28,429.4
	(*ii*) Area sown more than once	5,602 4

From the statement it is clear that an area of 1,28,429·4 hectares out of a total geographical area of 3,61,113·6 hectares representing as much as 35·56 per cent is the net area sown. An area of 5602·4 hectares is sown more than once. Of the remaining, an area of 29·16 per cent is under forests, 5·45 per cent. under non-agricultural use and 3·73 per cent under barren and uncultivable land. An area of 1.305 hectares representing 0·36 per cent was under permanent pastures and other grazing lands and an area of 594·2 hectares was under other miscellaneous tree crops and groves not included in net area sown. Cultivable waste accounted for 92,367·2 hectares, representing 25·58 per cent of the total geographical area.

Oi the cultivable area, an area of about 5,602·4 hectares is a double cropped area.

IRRIGATION

In the absence of official data regarding the area under irrigation, a rough guess only can be made in respect of the area under irrigation on the basis of statistics regarding land utilisation. It appears that about 6,000 hectares of rice fields receive irrigation. The other crops which require irrigation are arecanut, sugarcane and vegetables. It can, therefore, be inferred that an area of about 7,100 hectares is under irrigation.

Upto this time, no major irrigation project was even contemplated in the district. The Government have, however, recently undertaken an irrigation project at Salauli which is still in its primary stages.

Salauli Project

The site of the project which has already got clearance from the Government of India is located at Sirigal, 5 kilometres from Sanguem. The project, which is estimated to cost over Rs. 9,61,00,000 envisages construction of an earth-*cum*-masonry dam across the Zuari river, which

is known as Salauli in its upper reaches. The dam will be 1,314 metres long and 42·7 metres high. It will give rise to a reservoir covering an area of 24 square kilometres. A 25 kilometre long canal taking off from the reservoir on the left bank will irrigate over 14,000 hectares of land (het) in Sanguem, Quepem, and Salcete talukas. The additional yield of food grains and cash crops that will result from the irrigation facilities made available by the dam, will amount over 2,50,000 tons valued at over Rs. 5 crores. In addition, the reservoir will be a great source of perennial drinking water supply to the urban and rural areas of the territory. The construction of the dam will result in the submergence of nine villages.

The reservoir that would be created by the dam will have facilities for fishing and boating for visitors for whom a comfortable resthouse will be built near the dam overlooking the lakes and commanding a panoramic view of the surroundings. When all this is done, Sirigal will develop, in course of time, as another attractive tourist spot.

Tillari Project

Another irrigation project that is likely to be taken up is the Tillari project. The dam in this case will be situated in Maharashtra but considerable areas of north Goa will be also benefitted from it. In fact, of the 20,000 hectares proposed to be irrigated under this project, some 14,000 hectares will be in Goa. The capital cost of this project is now estimated at Rs. 153 million, which would mean an annual cost, at 10 per cent interest, of 15 million. Depreciation is allowed at one per cent of capital cost and administrative charges at Rs. 25 per hectare. Total annual cost thus works out to Rs. 17·3 million, or Rs. 715 per irrigated hectare. On a very rough basis it is estimated in the project report that the additional annual produce on areas irrigated will be worth about Rs. 21 million, which exceeds the estimated cost only by a small margin. Moreover, benefit being estimated gross of cost, the differential becomes negligible [1]

In the absence of any major irrigation project, the main sources of irrigation are storage tanks, small diversion bandharas, natural springs and well. The temporary bunds put across different nullahs to divert the water to canals leading to fields, is a common sight in the district. The two Government canals at Candepar and Paroda are diversion works on rivers having a post-monsoon flow. The Candepar canal taps the river flow water-fall at Colem, while the Paroda canal taps the Kushavati at Quepem.

The Candepar Canal was constructed during 1934-38 and was renovated during 1948-50. Originally meant to irrigate an area of

[1] Development Programme for Goa, Daman and Diu, p. 27.

537 hectares, the actual area irrigated by this canal comes to 177 hectares only. The Paroda canal was built in the early 50's with a view to irrigating an area of 600 hectares. However, the area actually irrigated is much less, in view of the fact that water requirements of soil are higher than assumed. The following statement gives the area irrigated under various crops by these two canals.[1]

Canal	Paddy	Sugarcane	Coconuts	Vegetables	Total
Candepar ..	94	69	14	....	177
Paroda ..	349	1	15	7	372

The water rates charged are as follows :—

		(Rs. per hectare) Candepar Canal	Paroda Canal
1	For the 1st grade paddy field	30	40
2	For the 2nd grade paddy field	20	30
3	For the chilli plantations	7	10
4	For the vegetable gardens	22	30
5	For the sugarcane plantations	60	80
6	For the coconut plantations	23	30

The working of these 2 canals is governed under the Legislative Diploma No. 1562 of 11th November 1954.

Only a small portion of the area irrigated is under irrigation by springs. Spring tanks are usually ponds supplying water through small springs. These are excavated at the foot of the hills and inside the farm land. It involves lift to the extent of about 1·5 metres. Country devices like lathi are used for lifting water. These are most common in khazan lands and other low-lying areas. The average area irrigated by a pond is reported to be less than an acre (·404686 hectares).

" The *Vangana* (rabi) crop of rice normally gets its water supply from storage tanks. There are over 400 tanks located mostly in Salcete and Bardez. The age-old practice is to store rain water from the receding monsoon in the rice fields at higher altitudes and then utilize the water for irrigating the low-lying areas. It may be noted that kharif rice is grown in the tank bed and the wasteweir is closed early in September after the kharif crop is harvested. A time-schedule for harvesting the crop under tank bed is drawn by the Zonal Agricultural Officer to ensure that the tanks are filled in time. These tanks irrigate only rice fields.

[1] An Economic Reveiw of Goa, Daman and Diu 1961-71, P. 75.

In the interior tract, especially in Ponda and Bicholim, where rivers have a post-monsoon flow, small *kuccha* diversion works are constructed annually to irrigate the rice fields and the arecanut gardens. These works are undertaken by private parties. In a few cases, canals run for more than 3 to 4 miles and the cultivators have to clean and repair the works after the monsoon.

There are innumerable natural springs, especially in valleys. These have been harnessed by the local population for the cultivation of arecanut trees and bananas. About three-fourths of the arecanut gardens are irrigated in this manner."[1]

In the district can be seen a considerable number of storage tanks. Excepting a few, all these tanks are seasonal. Rain water of late showers are stored in the tanks for irrigation of rabi crops while the tank beds are dry and available for cultivation in the kharif season. The practice is to use tank beds for cultivation during kharif, plug their openings with planks of wood and mud by September-October and fill them with water obtained from preceeding monsoon showers.

Well irrigation is found mostly in low-lying lands in Pernem and the Bardez talukas. The lift is low and water is drawn either manually or through pumps. Bullock labour is rarely in evidence. There are about 1,500 irrigation wells located mostly in coastal areas.

Since 1966-67, the Public Works Department have converted 15 temporary bunds into permanent ones and the work in respect of 20 more are in progress. *Pukkha bundharas* are generally built in cement concrete. Openings are closed in rabi season by a pair of planks filled by clay. The *bundharas* may have any length depending upon the width of the nullah or river. Generally the length varies from 10 to 30 metres and the height from 2 to 3 metres. The average cost also varies from Rs. 10,000·00 to Rs. 40,000·00. Government have also undertaken the construction of *vasanta bundharas*. The average length of the bunds is about 10 metres with a height of about 1·5 metres. The average cost varies from Rs. 3,000·00 to Rs. 6,000·00. The construction of 124 such bundharas have been taken up though the scheme has been initiated only in 1970. Estimated to cost about 5·72 lakhs, these bundharas will irrigate an area of about 700 acres (283·2802 hectares). Five important storage tanks have also been renovated to provide assured water supply to 578 acres (234·09 hectares). The Government have also undertaken the tapping of river flows by lift irrigation and have spent an amount of Rs. 1,60,000·00 to benefit an area of 1,700 acres (687·9662 hectares).

[1] Techno-Economic Survey of Goa, Daman and Diu 1964, pp. 32-33.

SOILS

Soils of the district can be classified as laterite, alluvial and sandy. The major portion of soils are of laterite category. It is highly acidic in nature, sandy loam to silt in texture and well drained. They are poor in lime, phosphorus and potash, but are fairly good in organic matter and nitrogen. Alluvial soils are subject to inundation by saline water and are to be protected by bunds. The coastal inland comprises a stretch of land with a high water table which can be exploited for irrigation and multiple cropping. These soils are also acidic, sandy to sandy loam, fairly rich in organic matter but deficient in phosphate and potash.

"The local population distinguishes different types of fields according to soil and rainfall conditions and nearness to the riverside. *Khajan* or *Cantar* lands are marshy, but very fertile. Invariably these are situated near the creeks and riversides. Though these lands are very fertile, ill-distributed rainfall, or a breach in the river embankments destroys the crop entirely. As such, cultivation is very risky and unless co-operative efforts are made to guard the embankments, farmers are unwilling to cultivate these fields. The area under *khajan* is estimated at 18,000 hectares distributed in Bardez, Bicholim, Ponda, Ilhas, Pernem, Salcete and Quepem talukas. Most of the *khajan* lands are in coastal talukas and on the border lands of the interior talukas. The average yield varies between 20 to 25 candies,[1] paddy per hectare. These are saline lands and require salt-resistant varieties. There are further distinctions in the *khajan* lands depending on the type of seed used (*shitto, corgut*, etc.).

Next, come the *ker* lands. These are the best rice lands in Goa and if properly cultivated would give a yield as high as 80 candies (paddy) per hectare. Water conditions are optimum, drainage is good and soils are of the alluvium type. Normally these lands are situated between *khajans* and *morods* (high land rice fields). A second crop of vegetables, onions, sweet potatoes can as well be grown here if irrigation facilities are available. Approximately 17,000 hectares of rice fields are of the *ker* type. However, the present position of lands is far from satisfactory. There is much population pressure in these areas and the result is that there are too many small holdings. Presently, the average yield varies from 20 to 25 candies per hectare.

The rest of the rice lands are termed as *Morod*. These are the plots situated on the high lands, with very good soils. The pressure of population has led to their cultivation. As these area are rainfed,

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[1] Candy is a volumetric measure, equal to 160 litres. Approximately eleven candies fo paddy weigh one ton.

only the kharif crop is cultivable. Yields are very low (in the vicinity of 7 to 8 candies per hectare) in the absence of manures and fertilizers and better cultivation methods. Certain *Morod* lands do yield as high as 15 to 20 candies per hectare, if manured with riverside silt and fertilizers. Use of silt is, however, possible only in the coastal tract.

Besides these three main types of rice lands, there is one more, viz. the *Kulne* lands. However, as these are high lands mostly located in the midst of forest areas, their hectarage is limited. Here *rabbing* (manuring with the ashes of dry wood and foliage) is generally practiced. Yields are also very low."[1]

Soil Conservation

The scheme of soil conservation was started in the year 1962-63 when most of the river embankments were in a dilapidated state and considerable area was under brackish water. Under soil conservation scheme, items like protection of agriculture land by repairs and reconstruction of river embankments, soil conservation in agricultural lands in plains, graded channels, terraces and waterways, soil conservation in agricultural lands in hills and levelling, field channeling in irrigated areas, pilot project for shifting cultivation, protective afforestation, etc., were executed during the year 1972-73, and an area of 600 hectares was thus protected.

Talukawise area protected in hectares and length of the bund repaired in the year from 1962 till 1973 are as follows :—

Serial No.	Name of the taluka	Area protected (in hectares)	Length of bund repaired (in mts.)
	Year 1962-63		
1.	Tiswadi ...	460	2,473
2.	Salcete ...	224	802
3.	Ponda ...	963·6	12,635
4.	Bicholim ...	292	6,740
5.	Bardez ...	33·2	1,230
6.	Canacona ...	35·2	960
7.	Pernem ...	32	400
8.	Mormugao ...	6	9
		2,046	25,249

[1] Techno-Economic Survey of Goa, Daman and Diu, 1964, pp. 25 and 28.

Serial No	Name of the taluka		Area protected (in hectares)	Length of bund repaired (in mtsl.)
		Year 1963-64		
1.	Tiswadi	...	316	6,742
2.	Salcete	...	744	7,620
3.	Ponda	...	94	7,820
4.	Bicholim	...	37	4,150
5.	Bardez	...	305	5,630
6.	Mormugao	...	30	2,000
7.	Pernem	...	90	4,180
8.	Canacona	...	10	2,600
			1,626	40,742
		Year 1964-65		
1.	Tiswadi	...	971·2	18,442
2.	Bardez	...	98	4,210
3.	Pernem	...	40	1,000
4.	Ponda	...	120	4,223
5.	Mormugao	...	10	582
6.	Salcete	...	152	2,720
7.	Bicholim	...	28	1,780
			1,419·2	32,957
		Year 1965-66		
1.	Tiswadi	...	296	6,911
2.	Salcete	...	238	6,223
3.	Ponda	...	856·4	10,459
4.	Mormugao	...	14	1,028
5.	Bardez	...	64	4,684
6.	Pernem	...	96	2,160
7.	Bicholim	...	44	1,515
8.	Quepem	...	4	37
			1,612·4	33,017
		Year 1966-67		
1.	Tiswadi	...	296	600
2.	Bardez	...	64	370
3.	Pernem	...	96	40
4.	Salcete	...	238	70
			694	1,080

Serial No.	Name of the Taluka		Area protected (in hectares)	Length of bund repaired (in mts.)
		Year 1967-68		
1.	Tiswadi	...	518	9,800
2.	Pernem	...	84	2,400
3.	Canacona	...	6	700
4.	Salcete	...	152	3,400
5.	Bardez	...	78	6,380
6.	Ponda	...	208	3,900
7.	Bicholim	...	116	1,092
8.	Mormugao	...	18	300
			1,180	27,972
		Year 1968-69		
1.	Tiswadi	...	380	5,500
2.	Bardez	...	72	3,100
3.	Salcete	...	193	2,700
4.	Ponda	...	240	5,700
5.	Mormugao	...	70	2,400
6.	Bicholim	...	116	1,400
7.	Pernem	...	106	1,200
8.	Canacona	...	40	70
			1,217	22,070
		Year 1969-70		
1.	Tiswadi	...	30	1,000
2.	Ponda	...	34	1,400
3.	Pernem	...	44	1,550
4.	Bardez	...	36	1,700
5.	Bicholim	...	14	300
6.	Salcete	...	18	350
			176	6,300
		Year 1970-71		
1.	Tiswadi	...	154	2,300
2.	Ponda	...	180	3,550
3.	Salcete	...	112	1,900
4.	Pernem	...	60	1,550
5.	Bardez	...	76	1,150
6.	Canacona	...	28	100
			610	10,550

Serial No.	Name of the taluka		Area protected (in hectares)	Length of bund repaired (in mts.)
	Year 1971-72			
1.	Tiswadi	...	748	11,240
2.	Pernem	...	66	860
3.	Salcete	...	152	1,355
4.	Bardez	...	27·2	135
5.	Canacona	...	44	1,070
6.	Bicholim	...	30	125
7.	Ponda	...	26	130
8.	Mormugao	...	32	120
			1,125·2	15,035
1.	Tiswadi	...	500	9,860
2.	Ponda	...	180	3,900
3.	Mormugao	...	144	2,800
4.	Canacona	...	48	880
5.	Salcete	...	132	1,300
			1,004	18,740

Cropped area

The chief food crops in the district are rice, other cereals, millets, and pulses, sugarcane and vegetables along with horticultural crops such as cashewnut, coconut, arecanut and other fruits like mango, pineapple, papaya, jackfruit, etc. The following table gives the approximate distribution of area under different food and horticultural crops in the district in 1970-71 and 1972-73.

TABLE No. 1—DISTRIBUTION OF AREA UNDER FOOD AND HORTICULTURAL CROPS

(Area in hectares)

Serial No.	Name of the crop	1970-71	1972-73
1.	*Food crops*		
	(i) Paddy ...	50,301·8	50,302
	(ii) Other cereals, millets* and pulses	23,781·4	23,781
	(iii) Sugarcane* ...	725·0	763
	(iv) Vegetables ...	400·0	400
	Total ...	75,208·2	75,246

*The area under sugarcane has steadily increased due to the setting up of a sugar factory in the district.

TABLE No. 1.—contd.

Serial No.	Name of the taluka	1970-71	1972-73
2.	*Horticultural crops*		
	(i) Cashewnut ...	32,517·1	32,518
	(ii) Coconut ...	18,495·9	18,496
	(iii) Arecanut ...	1,721·2	1,721
	(iv) Other fruits (mango, pineapple, bananas, papaya, jackfruit, etc.)	7,724·7	7,065
	Total ...	60,458·9	59,800

Paddy is the predominant crop and accounts for 37·08 per cent of the area under food crops including that under horticultural crops and 66·88 per cent of the area under the food crops excluding that under horticultural crops. The rest of the area sown is under inferior cereals and pulses, sugarcane, vegetables, etc. Other cereals, millets, and pulses account for 17·53 per cent of the area sown. They are followed by sugarcane and vegetables.

The district of Goa is an important producer of commercial crops such as cashewnut, coconut, arecanut, pineapple, mango, etc. The district has approximately an area of 60,458·9 hectares under horticultural crops. The pride of place in respect of horticultural crops is occupied by cashewnut which accounts for 32,517·1 hectares i.e. 53·78 per cent of the area under horticultural crops. It is followed by coconut with 18,495·9 hectares i.e. 30·59 per cent. of the area under horticultural crops. Fruits such as mango, pineapple, banana, papaya, jackfruit, etc. account for 7,724·7 hectares which is 12·78 per cent of the area under horticultural crops. Amongst horticultural crops arecanut comes last with an area of 1,721·2 hectares representing 2·85 per cent of the total area under horticultural crops.

The crop pattern visualised in coastal talukas differs considerably from the one found in the rest of the district. Rice is grown extensively as almost all the fertile low lands lie in this tract. Of the total area under rice cultivation more than 50 per cent is accounted for by this tract. Inferior millets and pulses dominates the crop

pattern in the interior tract. Garden crops are cultivated utilising waters from natural springs. Arecanut and cashewnut grow in abundance.

The following table gives talukawise distribution of crops grown in the district in 1972-73.

TABLE No. 2—TALUKAWISE DISTRIBUTION OF CROPS

Taluka	Paddy	Pulses and inferior millets	Coconuts	Arecanut	Cashewnut	Other fruits	Bamboos
1	2	3	4	5	6	7	8
Salcete ..	11,157	567	4,496	..	1,430	827	..
Mormugao ..	1,503	319	1,256	62	279	52	..
Tiswadi ..	6,889	189	1,474	21	3,966	419	143
Bardez ..	7,462	934	2,471	2	5,835	2,190	30
Sanguem ..	2,869	4,186	2,533	109	2,828	437	10
Satari ..	1,767	3,586	398	327	4,982	503	3
Quepem ..	5,068	923	1,346	23	1,085	1,025	..
Canacona ..	2,764	533	541	70	534	693	..
Bicholim ..	3,258	5,876	1,140	227	5,445	533	45
Ponda ..	3,844	3,546	1,671	876	2,621	254	349
Pernem ..	3,701	3,122	1,076	4	3,512	132	..
Total ..	50,302	23,781	18,402	1,721	32,517	7,065	580

Sugarcane is grown over an area covering 947 hectares. Cultivation of sugarcane is mainly concentrated in the talukas of Sanguem and Satari. Vegetables are also grown over an area of 400 hectares. However, the talukawise details for the same are not available.

Plantations

During the year 1972-73 till the end of December 1972, an area of 198 hectares had been planted with Eucalyptus bringing the total

area under eucalyptus to 5058 hectares planted so far. During the year 1972-73, 592 hectares were planted with teak, bringing the total area under Teak to 4527 hectares. Similarly, an area of 41 hectares was planted with rubber, bringing a total area under rubber to 221 hectares. The plantations of other miscellaneous species like cocoa was raised on a small experimental scale and the area planted with cocoa during the year 1972-73 was 4·5 hectares.

FOOD CROPS

Paddy

As has been stated earlier, an area of 75,208·2 hectares is under food crops. Of this, an area to the extent of 66·88 per cent of the total under food crops excluding that under horticultural crops in the district, is under rice cultivation.

In the district of Goa, generally 2 crops are grown depending on the availability of water after October. Presently, two crops are grown on about 5,600 hectares of land which is of the category of *ker* and *khajan*. The following table gives the area under rice fields talukawise for the year 1960-61 :—

TABLE No. 3.—TALUKAWISE AREA UNDER RICE FIELDS

District/Taluka	Rice fields			
	Total	Kharif	Rabi	Double cropped
1	2	3	4	5
District of Goa	44,699,1845	38,629,2534	467,5236	5,602,4075
Coastal Tract—				
Tiswadi	6,397.8027	5,906.9905	....	490.8122
Salcete	10,184.3638	9,206.3666	5.5709	972.4263
Bardez	6,664.2608	5,863.2643	3.0043	797.9922
Mormugao	1,019.2129	535.3166	....	483.8963
Interior Tract—				
Ponda	2,778.9806	1,685.7322	28.7505	1,064.4979
Bicholim	2,599.4593	1,829.6503	111.3243	658.4847
Pernem	3,503.9873	3,307.0312	....	196.9561
Quepem	4,837.9705	4,586.2255	1.5000	250.2450
Sanguem	2,421.6667	1,866.4107	108.1646	447.0914
Canacona	2,681.9993	2,471.6087	128.4500	81.9406
Satari	1,609.4806	1,370.6568	80.7590	158.0648

As per the crop cutting experiments conducted by the Bureau of Economics, Statistics and Evaluation, the average total production of paddy comes to about 75,000 tonnes. The following statement gives estimates of average yield of rice for 1971-72.

Taluka	Rice	
	Kharif	Rabi
1	2	3
Tiswadi	1,618	1,637
Bardez	1,802	1,633
Pernem	1,139	2,767
Bicholim	1,171	1,917
Satari	788	2,217
Ponda	1,025	2,415
Sanguem	845	2,524
Canacona	2,445	1,823
Quepem	1,139	1,827
Salcete	1,526	1,664
Mormugao	1,858	1,875
GOA DISTRICT	1,448	1,995

The practice of *rabbing* for preparing seed beds to raise seedlings is very common. Seed bed area is covered by a layer about three inches thick of dry leaves, dry cattle dung and other dry refuse and set fire to in April-May on the eastern end of the area, prefereably in the evening to allow for the slow burning which is accomplished easily because the evening sea breeze blows from west to east and as such it takes some time for the fire, set on the eastern side, to reach the western side. This process of burning the seed bed area is locally known as '*rab*' and is still followed probably with a view to destroying the weeds, weed seeds, harmful micro-organisms and insects and adding some manurial ingredients through the ash formed, to give a better start to the young seedlings. Since rains are due in the first week of June, the seed beds, after some operation with hand tools, are sown with paddy seeds early in June, either in anticipation of rains or immediately after rains. These seeds take about a month to come to the height suitable for transplanting and during this time the cultivators get busy in preparing land for transplanting. The preparatory tillage

of paddy lands consists of—(a) *ukhalani* or light ploughing ; (b) *chikhaluni* or puddling and (c) *guta phiravine* or planking or levelling. *Ukhalani* is done after first monsoon showers to break the hard crust of the surface soil so that penetration in the earth becomes easier for subsequent ploughings. Puddling is done by means of a light plough to prepare fine soft mud-beds for transplanting the seedlings. Puddling has to be done in all kinds of rice soils. A well-puddled field holds water longer and keeps the plants green. After puddling, a wooden plank is dragged by bullocks over the field to level the land.

As soon as the mud-beds get ready, seedlings are carefully uprooted from the seed bed, tied in small bundles and carried to *Khachars* where they are finally transplanted. Transplanting is done by hand. Generally eight to ten persons are required for transplanting an acre of land. Ten to fifteen seedlings held in a bunch are simply pressed in the mud with a spacing of nine or twelve inches both ways.

In the case of *Kuryat* lands. transplanting is replaced by broadcasting of sprouted seeds in puddled fields. This method is locally known as '*rahu*' method. Paddy seeds are put in an oven-shaped vessel in which they are submerged in water. The lighter seeds, which float on water surface, are rejected as the heavy seeds give better stand and yield. After about 12 to 24 hours, water is allowed to drain away and the soaked seed is then filled in bamboo *karandahs* (baskets) the inner side of which is covered by rice straw. Lukewarm water is then poured on the seed ; the top of *karandahs* or baskets is then covered by teak leaves and rice straw and loaded with stones and pieces of logs so as to create warmth inside, required for sprouting. On each of the two consecutive days, water is sprinkled over the paddy straw to keep the seed moist. In three days the seeds sprout well. The quantity of seeds required for sowing an acre of land under this method is about 60 to 80 lbs., as against 40 to 60 lbs. under transplanting.

In salt lands, early coarse varieties of paddy are generally sown. Sprouted seeds, two or three days old are broadcast in the field when the area becomes inaccessible after heavy rains. These get very hard on drying and get very soft and sticky when wet. Farmers find it almost impossible to enter the field when wet and hence the implements cannot be worked in such fields. This method of broadcasting sprouted seedlings is also followed in some parts where, after ploughing, the field remains inaccessible for sowing due to continuous torrential rains.

Dry sowing, which is known as *dhul-waf* sowing, is also done in some places, in the months of May and June just before rains. This method of sowing facilitates an early start for the seedlings.

In southern talukas, in the low-lying and retentives soils known as *shel-soils,* seed is sown during March and April. Hand digging of seed beds precedes ploughing. Seeds are sown by broadcasting. No *rabbing* is done. The seed germinate and the seedlings remain on the ground till monsoon starts. These seedlings are known as *Tap-tarava* and survive on dew and on the moisture retained by the soil. They are supposed to resist pest incidence, especially of the stemborers, in a better way.

The introduction of the Japanese method of paddy cultivation marks an important development in the processes of paddy cultivation. The main features of this method, in brief are as follows :—

(*i*) raised nurseries for seedlings ;
(*ii*) low seed rate for nurseries ;
(*iii*) heavy manuring of the crop, both in nurseries and in fields ;
(*iv*) transplantation of few seedlings per bunch ;
(*v*) transplanting in rows ; and
(*vi*) adequate interculturing and proper weeding.

In some parts, bold grain varieties like *bhadas,* etc. are grown for obtaining par-boiled rice which is mainly eaten here. Paddy is boiled in plain water for about half an hour till the husk slightly splits. Grain is then dried in shade for 3 to 4 days, de-husked and consumed in the form of boiled rice (*bhat*) or thick gruel (*ambil* or *pej*).

Waingan paddy is grown on high-lying or upland soil locally known as *kuryat* soils and low-lying, more retentive soils known as *mal* soils in the proximity of water facilities. In January-February paddy lands which become compact are artificially irrigated and immediately ploughed both lengthwise and breadthwise so that clods do not come up. Clods are then crushed by *gutephali* on the third day and land is again ploughed both lengthwise and breadthwise after irrigation, followed by clod crushing. Bunds are then prepared in the rice fields at suitable places to divide the field into compartments (*dala* or *choudas*) for compounding water and are plastered with mud so as not to allow any growth of weeds. Land is then puddled by a plough ; puddling is best achieved by the use of *gutephali* after puddling by plough. Where *waingan* paddy is grown on interior well terraced and bunded lands, as many as six ploughings are given both lengthwise and breadthwise, so as to bring land into good puddled condition so essential for (i) standing water and (ii) for

preventing drainage of water in the hot season. Twelve to fifteen cart-loads of farm yard manure per acre are applied evenly and uniformly all over the field before pudding. Application of more quantity is considered desirable as it helps the retention of soil moisture so badly required for the paddy crop in the hot season. In order to minimise water drainage, fresh cow-dung per slurry (*shena-kala*), by using about one cart-load of fresh cowdung per acre is uniformly spread after puddling. When water is about one inch high in the field, sprouted seeds of paddy called *rahu* are broadcast equally all over the field. About 50-60 lbs. of seed on *kuryat* lands and 60-80 lbs. of seed on *mal* lands are required per acre. The *Patni-6* variety is always preferred by the cultivators because it ripens early and thus enables them to take the next kharif crop. The seed is well dried before sowing. Some days after broadcasting the sprouted seed in the fields, small quantity of water is given each day till all the seeds have germinated completely. Irrigation water is applied each day either in the evening or early in the morning with the intention of giving maximum benefit of water to the growing plants. Considerable vigilance is exercised by the cultivators to prevent the land from cracking. Additional quantity of water is required when the crop reaches flowering stage. Cultivators apply nitrogen as top dressing in the form of cake, as concentrated manures like ammonium sulphate may cause scorching of the seedlings if water supply is inadequate. About 25-30 lbs. of nitrogen per acre are applied in two equal instalments, one after the establishment of the seedlings and the other before flowering time, i.e. seven to eight weeks after sowing *waingan* paddy, the Patni-6 variety of paddy. No weeding is required as weeds do not come up in well-puddled lands.

Water is withheld for about eight to ten days prior to harvesting. The *Patni-6* variety is ready for harvest after 3½ months from sowing. The plants are cut close to the ground by sickle and allowed to dry for a day or two and then removed to the threshing yard. They are then beaten against a plank when the seed is separated from the panicles. The seed is winnowed, well-dried and then preserved. If due care is taken, yield of about 1,600 lbs. of paddy per acre can be reaped. The paddy and the straw obtained from the *waingan* crop are supposed to be more nutritious. As the yield in the district is considerably low, whatever stock of grain is stored by the cultivators is meant not for marketing but for consumption only. They use wooden bins or boxes (*kothars*) and *kangas* (bamboo mats made into hollow cylinders) for storing. *Kanga* is plastered on both sides with dung and its bottom is sunk in the ground to a depth of nine inches, in the house or outside the house in a verandah. After thoroughly

cleaning it from inside, paddy is filled in and covered with straw. The opening of the *kangas* is secured by light plastering or by stitching with gunny cloth.

Paddy is used for parching and popping and is made into products like *poha* and *murmura*.

Acquaintance of Goa farmers with high yielding variety of paddy began in the kharif season of 1966 when Taichung Native-1 and Taichung-65 were introduced in the district for the first time over an area of more than 2,400 hectares. Other varieties such as IR-8, Padma, Jaya followed in quick succession. During 1970-71, almost all the paddy fields covering an area of 11,000 hectares were under the cultivation of high yielding varieties of paddy. These new varieties have proved a boon to the farmers. The average production of paddy per hectare which was about 1,600 kg., in case of normal seedlings rose to 3,000 kg. with the introduction of high yielding varieties. More progressive farmers received outstanding results. One farmer from Lamgao in the Bicholim taluka, reaped a harvest of 10,000 kg. of IR-8 paddy per hectare. Another one from Loliem in the Canacona taluka produced about 9,500 kg. per hectare of IR-8, PTB-10 and Padma. Another one from Birondem in the Satari taluka also changed over to IR-8 to step up production to the extent of 10,000 kg. per hectare. Introduction of high yielding varieties of paddy resulted in a considerable additional production of paddy during recent years. Production of paddy which was about 70,000 tonnes in 1962-63 rose to 99,532 metric tonnes in 1969-70 and 98,378 tonnes in 1970-71. By the end of the Fourth Five-Year Plan an area of 16,000 hectares would be brought under the cultivation of high yielding varieties of paddy. Another area of 12,800 hectares would also come under the improved varieties under the Fourth Five-Year Plan. Some more high yielding varieties like Kaneri, IR-20, Kanchi, Pankaj and Jagannath are being experimented with at the Ella farm. This also will be popularised if found suitable.

The following statement gives the zone-wise area covered under the high yielding variety programme during the year 1972-73 :—

Name of the Zone	*Area covered*
Curchorem	2,152
Margao	3,348
Mapusa	3,855
Ponda	3,556
Bicholim	1,643

It may be noted that production of paddy has also increased from about 70,000 tons in the year 1962-63 to 1,15,159 tons by 1972-73, representing an increase of 64·51 per cent.

The following statement gives the talukawise break-up of paddy production in the year 1972-73 :—

(1) Tiswadi	...	...	17,919
(2) Bardez	...	...	17,734
(3) Pernem	...	...	9,700
(4) Bicholim	...	...	7,790
(5) Satari	...	...	3,121
(6) Ponda	...	...	7,219
(7) Sanguem	...	...	6,667
(8) Canacona	...	...	8,328
(9) Quepem	...	...	9,080
(10) Salcete	...	...	22,785
(11) Mormugao	...	...	4,816

PULSES AND INFERIOR MILLETS

Of the total area of 75,208·2 hectares excluding the area under horticultural crops. an area of 23,781·4 hectares is under the cultivation of millets, pulses and other cereals. The most important inferior millet grown in the district is ragi (*nachni*) which is the staple food of the poor sections of society. Pulses such as kulith and beans are grown on *borod* lands not suitable for rice cultivation. These crops are mostly utilised for domestic purposes. The following statement gives area under the production of pulses and inferior millets talukawise for the year 1960 :—

District/Taluka				Pulses and inferior Millets (in hectares)
District of Goa		...	...	23,781·4364
Tiswadi	...	...	...	189·3820
Salcete	...	...	...	566·8426
Bardez	...	...	...	934·3985
Mormugao	...	...	...	318·8896

cleaning it from inside, paddy is filled in and covered with straw. The opening of the *kangas* is secured by light plastering or by stitching with gunny cloth.

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(3) Pernem	9,700
(4) Bicholim	7,790
(5) Satari	3,121
(6) Ponda	7,219
(7) Sanguem	6,667
(8) Canacona	8,328
(9) Quepem	9,080
(10) Salcete	22,785
(11) Mormugao	4,816

PULSES AND INFERIOR MILLETS

Of the total area of 75,208·2 hectares excluding the area under horticultural crops, an area of 23,781·4 hectares is under the cultivation of millets, pulses and other cereals. The most important inferior millet grown in the district is ragi (*nachni*) which is the staple food of the poor sections of society. Pulses such as kulith and beans are grown on *borod* lands not suitable for rice cultivation. These crops are mostly utilised for domestic purposes. The following statement gives area under the production of pulses and inferior millets talukawise for the year 1960 :—

District/Taluka	Pulses and inferior Millets (in hectares)
District of Goa	23,781·4364
Tiswadi	189·3820
Salcete	566·8426
Bardez	934·3985
Mormugao	318·8896

District/Taluk	Pulses and inferior Millets (in hectares)
Ponda	3,545·9706
Bicholim	5,875·4156
Pernem	3,122·3553
Quepem	922·8305
Sanguem	4,185·8941
Canacona	533·0870
Satari	3,586·3706

Nachani is generally grown in kharif season on light and slopey lands. Seedlings are raised on seed beds (about 5 to 6 gunthas) in a line prepared by *rabbing*. Seed rate is about 6 to 8 pounds. Land is ploughed twice or thrice and seedlings are transplanted at a distance of 6 inches, in July, in terraced fields. The crop is given fish manure at the rate of about 15 to 20 maunds per hectare and is buried deep in the soil when the seedlings have transplanted. Early varieties take about 130-135 days to mature whereas late varieties require about 150 days for ripening. After tillage, work consists of hand weeding once or twice. The mature plants are cut close to the ground and brought to the threshing yard where ear-heads are separated, dried and threshed by hand or under the bullocks feet. The yield of *nachani* averages to about 1,500 to 2,000 pounds per hectare. The internal production of *nachani* is estimated at about 6,340 tonnes.

HORTICULTURE

Garden Crops

An area to the extent of 60,458·9 hectares in the district is under garden crops. These are mostly cashew crops which are either exported or which form the basis of a few-well-established agrobased industries. These garden crops account for about 60 per cent of the agricultural income.

Cashew nut

The most important crop from this group is cashewnut and it covers an area of 32,517·7 hectares i.e. 53·78 per cent of the area under garden crops. Of the area under cashewnut more than 2/3 is to be found in the internal tract. Large concentration is to be witnessed in the talukas of Satari and Bicholim in the North of Goa

and they account for little less than 1/3 of the area under cashewnut. The following statement gives area under cashewnut talukawise :—

District /Taluka	Cashew Production (in hectares)
District of Goa	32,517·0750
Tiswadi	3,965·9562
Bardez	5,835·4562
Salcete	1,430·4623
Mormugao	279·2930
Ponda	2,620·5414
Bicholim	5,444·6736
Pernem	3,511·9813
Quepem	1,084·9570
Sanguem	2,827·9791
Canacona	533·7062
Satari	4,982·0687

It is clear from the statement that the taluka of Bardez has the maximum cultivation and is followed by the talukas of Bicholim, Satari and then by the rest.

" There are no regular cashew plantations in Goa. Trees are usually found on hilly sides mixed with other vegetation or scattered on open pastures. Except occasional clearing of undergrowth and pruning of dead and diseased branches no attention is paid to cultivation, irrigation or manure. Plantations are also thinly spread, as is evident from the figure of about 25 trees per hectare. Farmers visit the trees only during the harvest. Consequently, the yields are very low. On the basis of export and import statistics, the total annual production may be estimated at around 3,000 tonnes as against the official estimate of 6,000 tonnes. Yield rates vary from 4·5 lbs. per tree (Bicholim and Sanguem) to 1·5 lbs. (Salcete and Ponda). These yields are very low compared to the average yield per tree in Kerala which is 20 lbs. "[1]

Coconut

Amongst garden crops, cashew is followed by coconut, with 18,496·2 hectares representing 30·59 per cent of the total area. The following statement gives the area under coconut talukawise for the year 1970

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[1] Techno-Economic Survey of Goa, Daman and Diu 1964, pp. 29-30.

District/Taluka	Area under coconut production (in hectares)
District of Goa	18,496·1759
Tiswadi	1,474·1331
Salcete	4,590·4421
Bardez	2,471·3961
Mormugao	1,255·5700
Ponda	1,671·1031
Bicholim	1,139·9325
Pernem	1,075·7462
Quepem	1,346·0575
Sanguem	2,533·2065
Canacona	541·0032
Satari	397·5856

The coconut tree thrives well on the coastal lands and near the riverside in the interior tract where soils are sandy. Coastal tract account for about ½ of the area under coconut, with good plantations in Salcete and Bardez Talukas. An official estimate puts the number of trees in Goa to 2·03 million in 1954. Most of the trees are old and beyond their fruitful life. The official estimates then, put the production at 70 million nuts.

"On the basis of one nut per day per family, the internal consumption in the territory may be estimated at 40 million per year. Exports of coconuts averaged 3,71,000 per annum over 1955-59. (In 1951, the exports stood at 34 million, reached a level of 8 million in 1954 and thereafter were less than half-a-million. Not much variation in the exports of coconut oil is to be noticed). Copra and coconut oil exports were intermittent over the last decade. These exports amount to about 4,50,000 nuts in terms of raw coconuts. It appears, therefore, that the production is not more than 70 million nuts every year."[1]

Three varieties in Goa known as Benaulim, Siolim and Rivona are valued much by the farmers as well as by the consumers. Benaulim variety is valued for its delicacy and good yield. Siolim coconut is of a bigger size and is valued for its copra content. Rivona type comes in between.

[1] Techno-Economic Survey of Goa, Daman and Diu, p. 30.

Arecanut: Besides cashewnut and coconut, the third important crop grown under garden crops is that of arecanut. It covers an area of 1,721·7 hectares representing 2·85 per cent of the total area under garden crops. The following statement gives area under arecanut talukwise for the year 1970

District / Taluka	Area under arecanut production (in hectares)
District of Goa	1,721·1541
Tiswadi	20·6446
Salcete	......
Bardez	2·1409
Mormugao	62·5972
Ponda	875·3495
Bicholim	227·2791
Pernem	4·2001
Quepem	22·8175
Sanguem	109·0314
Canacona	69·8250
Satari	327·2688

The area under arecanut is highest in the taluka of Ponda followed by Satari, Bicholim, Sanguem and then by the remaining talukas.

"Arecanut is an important plantation crop in Goa. The development, apart from easing the country's supply position, would bring great benefits to the Goan farmers who were practically ruined owing to uneconomic prices prevalent in the last decade and the general neglect of the gardens resulting therefore.

Areca is a delicate palm tree which thrives well in regions of heavy rainfall and high humidity, with an elevation of below 915 metres (3,000 ft.). It requires abundant irrigation during the hot rainless months. It is a shade-loving plant and grows best when planted with plantain, banana, mango, jack and guava trees. These shady trees provide the required cool and moist atmosphere. Owing to the rigorous soil, climatic and water conditions required for the growth of arecanuts, they are to be seen only in the interior tract, where bowls and valleys are full of natural springs. Most of these plantations are old and overcrowded.

The ideal number of plants per acre is about 400; but in Goa about 1,000 to 1,200 plants are seen in an acre. Such overcrowding affects the yields very adversely. The uneconomic prices prevalent in the last 7 to 8 years have led to a complete neglect of these gardens. No systematic attempt has been made to plant seedlings for replacement; there are no nurseries; no care is taken in selecting the

seed nuts; use of fertilizers is unkown and the farm yard manure that is used is hardly sufficient for the area covered. Hoeing and weeding operations have been in arrears owing to the high labour costs that followed booming mining activity. Further, in the last decade, the Goan plantations were affected by *phytophthora palmivora* (*kala rog*), a deadly infectious disease, which causes tender nuts to rot and fall off, thus destroying the whole crop. Very little remedial action was taken to protect the gardens.

The production of arecanut in 1960 is officially estimated at 1,500 metric tons (about 40,500 mds.) which appears to be on the high side. During the last decade, arecanut exports from Goa averaged about 385 tons per year valued at Rs. 3 lakhs. As the major market for the Goan arecanut was India, it may be better to compare the exports before 1954, the year when the economic blockade was imposed. It would be seen, that even before that year, the exports did not touch 600 metric tons a year. As there are no industries based on arecanut within the territory and as it is impossible to believe that the rest of the production (about 2,500 metric tons) was consumed locally, it is certain that the official production figure is an overestimate. Also, in view of the fact that the gardens were affected by *phytophthora palmivora* (fruit rot, nutfall and bud rot) since 1954-55, little credence can be given to the above estimate.

The yield data also do not appear to be reliable. On the basis of official estimate, the yield per acre is Goa works out at 16·86 mds., compared to 8·32 mds. for India In the neighbouring States of Karnatak and Maharashtra where the gardens have been maintained better, the yield per acre is around 10 to 11 mds. The incidence of disease and the general neglect of the gardens in the wake of uneconomic prices since 1955 must have affected the yield adversely. On the basis of export data, it, therefore, appears that the current production would be around 400 to 500 metric tons. The official figure can be considered as the potential of the existing gardens."[1]

Fruit trees

In the year 1970, an area of 7,724·7 hectares representing 12·78 per cent of the total area under garden crops was under fruit trees such as mango, pineapple, banana, papaya, jackfruit, etc. Pineapple plantations are mostly witnessed in the Ponda taluka. Elsewhere they are planted on the border lands of arecanut gardens. They give good yield inspite of the indifferent methods of cultivation. Current production is estimated at more than 0·5 million fruits. No large

[1] Techno-Economic Survey of Goa, Daman and Diu 1964, pp. 30-31.

scale plantations of mangoes are seen. Mango trees are intermixed with other plantations which is the case in respect of jackfruit too. In view of the good price fetched by mangoes, mango trees are properly looked after, manured and protected. The annual production of mangoes is estimated at more than 2 million.

Bananas usually constitute a secondary crop in cashewnut and arecanut gardens. They were a source of income to the farmers during the period when *kala rog* struck the areca plantations. However, import of cheap bananas from the neighbouring State particularly from Karnataka, has affected the indigenous producers adversely. The yield of bananas in the district is very low and can be contributed to the primitive conditions of cultivation since they have always been looked upon as a by-product by the areca garden owners.

Horticultural Development

The aim of the scheme is to explore fully the vast resources that this territory offers for the cultivation of a wide range of fruits and vegetable crops. The scheme also aims to make available to farmers stock of proper quantity along with proper credit facilities to make both new plantations and rejuvenation of old gardens possible.

The following table gives the details of the different fruit stocks distributed from 1963-64 to 1972-73 :—

VEGETABLES

Goa district always faces shortage of fresh vegetables and about 80 per cent of the supply is imported from Belgaum. The area under vegetables which was only 78 hectares in 1960 has gone up to 400 hectares by 1970.

Under vegetable development, multiplication of vegetables seeds is being done at the Research station. Besides seeds of improved varieties are produced from renowned nurseries and supplied to the cultivators. Annually, production of vegetables is from about 4,500 to 5,000 tonnes.

SUGARCANE

The area under sugarcane in the district which was placed at 69·7104 hectares in 1960 is estimated at 947 hectares by 1972-73. It is especially grown in the internal tracts in the Sanguem and Satari Talukas where irrigation facilities are available.

The yield of sugarcane has also increased from 25 tonnes to 60 tonnes per hectare. This has been achieved by the high yielding varieties of cane and introduction of modern methods of cultivation. The

TABLE No. 4—DETAILS OF FRUIT STOCK DISTRIBUTED AFTER LIBERATION IN GOA

Item	Years									
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Arecanut	....	....	....	....	....	4,420	5,000	....	1,000	3,000
Banana	....	9,700	6,000	....	40,000	31,827	....	....	2,990	....
Cashewnut	3,60,000	17,000	25,50,000	10,00,000	....	66,112	5,00,000	4,87,500	4,76,300	4,22,750
Chickoo	....	....	2,500	....	750	462	3,000	1,550	600	600
Custard Apple	....	...	...	....	....	27	1,000	....	....	1,891
Coconut	40,000	50,000	75,000	75,000	80,000	12,620	75,000	71,300	61,956	87,282
Guava	....	....	....	....	750	....	1,000	1,359	1,500	....
Lime	....	....	....	....	....	541	1,000	130	....	1,300
Mango	5,000	1,500	10,500	1,000	1,250	3,704	3,000	2,139	300	2,391
Pineapple	30,000	2,40,000	1,25,000	....	500	20,900	57,000	....	....	27,000
Papaya	....	....	....	....	2,250	....	....	....	19	....
Others	....	....	....	460	....	435	....	2,485	290	....

following statement gives the zone-wise breakup of area under sugarcane cultivation.

Name of the Zone	Area covered
Curchorem	740 hectares
Margao	100 hectares
Ponda	7 hectares
Bicholim	100 hectares

NON-FOOD CROPS

Besides the food crops, the only crop that some may grow along the side of garden plantations, road sides and on the hill slopes is that of bamboo groves. Bamboo groves cover an area of about 500 hectares. The following statement gives area under bamboo groves talukawise for the year 1960.

District / Taluka	Area under Bamboo production (in hectares)
District of Goa	580·2590
Tiswadi	143·5055
Bardez	29·5179
Ponda	348·5184
Bicholim	44·7033
Sanguem	10·2064
Satari	3·8075

"These plantations are privately owned and yield a thornless variety of bamboo. Exports of bamboo from Goa averaged 108,000 in number (Approximate weight—410 tonnes) per annum during 1956-60. Prior to 1955, they were of the order of 200,000 as most of the exports then were to other parts of the country. Assuming the internal consumption at 50 per cent of the exports, the production may be estimated at 615 tonnes per annum. The average yield works out at about 0·42 ton per acre which is a little less than the normal yield (0·5 ton per acre)."[1]

HOLDINGS

The existing distribution of ownership of land by different entities in the district is as follows :—

[1] Techno-Economic Survey of Goa, Daman and Diu 1964, p. 31.

TABLE No. 5—PERCENTAGE DISTRIBUTION OF LAND OWNERSHIP BY DIFFERENT ENTITIES IN GOA

Talukas	Govern-ment	Munici-pality	Associa-tions	Churches	Arch-diocese of Goa	Charity insti-tutions	Temples	Communi-dades	Private	In litigation
Coastal Tract	....	....	....	....	....	....	....	60·8	36·7	....
Bardez	....	....	....	....	....	....	1·0	85·0	14·0	....
Tiswadi	2·7	8·1	1·2	1·3	0·1	0·9	0·1	34·9	58·6	0·1
Mormugao	....	....	....	3·0	....	....	....	60·0	37·0	....
Salcete..	....	....	....	2·0	....	....	1·0	60·0	37·0	....
Interior Tract	27·3	....	....	....	....	....	3·7	20·4	48·6	....
Pernem	10·0	....	....	....	....	....	4·0	6·0	80·0	....
Bicholim	3·0	....	....	....	....	....	2·0	15·0	80·0	....
Satari	50·0	....	....	....	....	....	3·0	2·0	45·0	....
Ponda	....	....	....	....	....	....	5·0	35·0	60·0	....
Sanguem	58·0	....	....	....	....	....	2·0	15·0	25·0	....
Quepem	30·0	....	....	....	....	....	5·0	40·0	25·0	....
Canacona	40·0	....	....	....	....	....	5·0	30·0	25·0	....
Goa	17·7	....	....	....	....	....	2·6	34·8	44·3	....

Data pertaining to the size of holdings is not available except in the case of communidades. In coastal tracts large size holdings between 200 hectares and 1,000 hectares are owned by communidades. In North Goa, specially at Pernem and Bicholim, a few private holdings are very large and exceed 100 hectares. The average size of the unit of cultivation in Goa is about ½ hectare (about 1·25 acres). Thus even though the individual and community holdings vary from 200 to 500 hectares, or even more, the unit of cultivation is generally small. An average tenant of the community cultivates an area of 0·81 hectares (about 2·02 acres) barring lands under forests. Private lands are fragmented frequently measuring only a few square metres. The average holdings is about 5 hectares. The majority of private holdings in the interior tracts are small i.e. between 0·5 and 10 hectares. The available information relates to 3 talukas of Bicholim, Ponda and Tiswadi and can be considered as illustrative of the situation obtaining in the district and hence it is reproduced below.

DISTRIBUTION OF HOLDINGS BY SIZE-GROUPS
(BICHOLIM TALUKA)

Size of plot		Number of holdings	Percentage	Area covered by the holdings (hectares)	Percentage
Less than 0·1 ha.	..	2,243	26·61	107·7	0·45
Between 0·1—2	..	4,859	57·64	2,559·5	10·76
Between 2—4	..	535	6·35	1,486·4	6·25
Between 4—20	..	659	7·82	5,495·3	23·09
Between 20—100	..	105	1·24	4,006·2	16·84
Above 100	..	29	0·34	10,137·5	42·61
Total	..	8,430	100·00	23,792·6	100·00
Streets, Rivers, etc.	..	....	....	391·1	....
Total area	..	....	....	24,183·9	100·00

DISTRIBUTION OF HOLDINGS BY SIZE-GROUPS (PONDA TALUKA)

Size of plot		No. of holdings	percentage	Area covered by the holdings (hectares)	Percentage
Less than 0·1 ha.	..	2,161	25·92	84·5	0·34
Between 0·1—2	..	4,604	55·22	2,713·2	10·92
Between 2—4	..	710	8·52	2,064·2	8·31
Between 4—20	..	679	8·14	5,345·2	21·51
Between 20—100	..	145	1·74	5,835·3	23·48
Above 100	..	38	0·46	8,806·6	35·44
Total	..	8,337	100·00	24,849·0	100·00
Streets, rivers, etc.	..	....	....	379·3	....
Total area	..	....	. ..	25,228.5	100·00

DISTRIBUTION OF HOLDINGS BY SIZE-GROUPS (TISWADI TALUKA)

Size of plot		No. of holdings	Percentage	Area covered by the holdings (hectares)	Percentage
Less than 0·1 ha.	..	3,342	34·99	158 2.	1·07
Between 0·1—2	..	5,246	54·92	2,748·30	18·66
Between 2—4	..	427	4·47	1,239·54	8·42
Between 4—20	..	419	4·38	3,624·25	24·60
Between 20—100	..	104	1·09	4,526·00	30·73
Above 100	..	14	0·15	2,432·54	16·52
Total	..	9,552	100·00	14,728·95	100·00
Streets, houses, rivers, etc.	..	....	....	405·26	....
Total area	..	....	....	15,134·22	100·00

CO-OPERATIVE FARMING

Co-operatives have been considered as effective remedies against small holdings as also in the difficulties envisaged in agricultural operations. For this purpose, two types of co-operatives are established namely farming co-operatives and service co-operatives. Organisation of co-operative farming implies polling of land belonging to different cultivators together and joint cultivation on co-operative basis. While undermining the senses of proprietorship and the incentives it provides to industry, co-operative farmers enjoy all the advantages that a large unit possesses. The foremost objective of establishing this type of society is to raise agricultural output to the maximum with the joint efforts of the agriculturist members of the co-operative. Service co-operatives are established with a view to rendering agricultural service such as providing land for raising agricultural crops, supply of better seeds, improved agricultural implements, manures and fertilizers and making available insecticides, pesticides, fungicides, etc. required for protecting crops. In the district of Goa, there are 2 farming co-operative societies (as on June 30, 1971). They had a membership of 54 and share capital of Rs. 9,000·00 respectively. During the year 1970-71, these societies effected sales to the order of Rs. 5,000·00.

The first service co-operative society was registered on March 4, 1963 and is known as the Nagargaon Group Vividha Karyakari Sahakari Society Ltd., Nagargaon. As on June 30, 1971 there were in the district 160 service co-operatives. Of these 38 were registered in 1962-63 and 116 were registered in 1963-64. These societies had a total membership of 57,064 and a share capital of Rs. 15,77,000·00. With a working capital of Rs. 42,82,000·00 these societies had deposits to the tune of Rs. 1,85,000·00. Loans amounting to Rs. 17,99,000·00 were outstanding with members.

AGRICULTURAL RESEARCH AND EDUCATION

For the first time research work was taken up in this Union Territory by establishing an Agricultural and Horticultural Research Station at Yella, in 1965. This research station consists of about 32·3 hectares of land.

Activities like conducting the Agronomic and varietal trials, introduction of new promising varieties of different crops, establishing the progeny orchards etc. were carried in this Research and Experimental station.

The following important varieties of different crops are tried at the centre:—

1. *Varietal Trials* (*Varieties introduced*)—
   (a) Paddy (Improved : Patni-6, ITB-10, MTO-20, LEB-24, ER-70, Cotumberi-Sal, Ratnagiri, etc.
   (b) Paddy (HYV) : TN-1, IR-8, Padma, A.D.T.-27, Jaya, Annapurna, Jagannath.
2. *Nachani:* White ragi, Annapurna, Purna.
3. *Maize* · Deccan Hybrid, Composite ganga.
4. *Jawar:* CSH-1, CSH-2, Swarna.
5. *Bajra:* H. B. 1.
6 *Groundnut:* TMV-2, Spanish Improved, SB-XI, G.N. 268.
7. *Wheat:* Sonora-64, Sonalika, Kalyan, Sona, Luma, Rojo.

II. *New Crops introduced*—

1. *Tapioca:* Malabar spl., Malayam 4.
2. *Potato:* Kujri-Sindhuri, Jyoti, Chandramukhi.
3. *Spices:* Cloves, Nutmeg, Cocoa, Coffee.
4. *Cotton:* PRS-72, MUC-5.

III. *Agronomic trials*—

1. *Fertilizer trials:* N-80, P-40, K-40 kgs. per ha. for High Yielding Varieties of paddy.
2 *Spacing trials:* 15 cms. × 10 cms. for paddy crops.
3. *Soil conditioners:* Lime/dolomite, 1250 kgs. per hectare.

IV. *Progeny orchards established:* Progeny orchards of coconut, chickoo, mango, groves, etc. have been established.

Soil Analysing

In order to analyse the soils from the cultivators field and to recommend to them the correct doses of fertilizers, a soil testing laboratory was established at the site of Research station during 1968-69. The number of soil samples analysed are as follows :—

(1) 1970-71	724
(2) 1971-72	2,000
(3) 1972-73	3,137

Extension Training Centre

The centre was established in December 1964 for imparting training in various fields of agriculture and staff engaged in agencies like Gramsevaks, Panchayat Secretaries, etc. Since its inception, the following courses have been conducted.

Serial No.	Name of the course	No. of persons trained	No. of courses conducted	Period
1	Two years certificate course in agriculture for Agricultural Assistance.	18	2	(1) 1964 to 1966 (2) 1965 to 1967
2	One year course in Home Science to preserve Gramsevaks.	46	3	(1) 1965 to 1966 (2) 1966 to 1967 (3) 1967 to 1968
3	Two years job training course to village level workers.	18	3	(1) January 1967 to December 1968. (2) January 1969 to December 1970. (3) January 1971 to December 1972.
4	Three months training programme to village Panchayat Secretaries.	79	2	(1) September to December 1969. (2) December 1969 to March 1970.
5	One month training course to associate women workers.	49	2	(1) March 1970 to April 1970. (2) August 1972 to September 1972.

Agricultural Implements

The field tools and implements which are used in the district, are usually of an old and indigenous type. The implements in active use in the district can be broadly classified as soil preparation implements and hand tools.

(1) Soil preparation implements :—

(i) Plough
(ii) Clod-crusher
(iii) Peg tooth harrow
(iv) Leveller

(2) Hand tools :—

(i) Narrow spade
(ii) Flat spade
(iii) Pick-axe
(iv) Axe
(v) Rake
(vi) Fork
(vii) Water splasher
(viii) Wood-cutting big knife.
(ix) Sickle
(x) Weeding hook
(xi) Crow-bar

Besides, some plant protection equipment, sprayers, dusters, power tillers, tractors, etc. are also utilised by the farmers in the district.

At the time of Liberation, the Department had 28 tractors and 1 bulldozer. Thirty-eight tractors and 8 bulldozers were added after Liberation. At present the Mechanical cultivation section is having a fleet of 54 tractors and 14 bulldozers and 20 power tillers. After Liberation 4 more tractors stations were added to the 3 tractors

stations already existing at the time of Liberation to meet the increasing demand of cultivators and to provide the agriculturist with the right type of machines and modern agricultural implements in time. The details of the tractors, bulldozers and power tillers at each station are as follows :—

Station	Number of		
	Tractors	Power tillers	Bulldozers
Panaji	24	4	3
Margao	7	4	2
Mapusa	11	4	1
Bicholim	4	2	2
Ponda	3	3	1
Curchorem	5	3	5

These machineries are hired out at the following rates which have been fixed on the basis of no profit no loss.

Tractor with implements	... ... Rs.	12·50 per hour
Bulldozer 90 HP	... ... Rs.	65·00 per hour
Bulldozer 165 HP	... ... Rs.	115·00 per hour
Power tiller	... ... Rs.	5·50 per hour

Achievement under these machineries for the last 10 years are as follows :—

Tractor achievements

Year	Working hours	Area ploughed in hectares
1963-64	13390	2142
1964-65	12177	1948
1965-66	15223	2436
1966-67	12400	1984
1967-68	17530	2805
1968-69	14572	2332
1969-70	16212	2594
1970-71	14503	2220
1971-72	14464	2314·5
1972-73	20915·55	3346·5

Bulldozers

Year	Working hours	Area ploughed in hectares
1969-70	1064·45	152
1970-71	3032·45	433·0
1971-72	3775·30	539·5
1972-73	4192·00	599·0

Power tillers: Power tillers have been purchased during 1972-73 and put into commission from 1973-74 onwards, the details of which are given in the Appendix 6.

Pump-sets: The hiring of pump-sets of any horse power was fixed at a flat rate of Rs. 25·00 per month. This rate was revised in the year 1970-71 and fixed as Rs. 50.00 per month for 3 HP pump-set, Rs. 66·00 for 3.5 HP pump-set, Rs. 82·00 for 5·6 HP to 8 HP pump-set. Hourly rate fixed for water-pumps for the years 1968-69 to 1972-73 is given below :—

(Value in Rs.)

Type of pump	Unit of rate	Years				
		1968-69	1969-70	1970-71	1971-72	1972-73
(a) 1.2 HP to 3 HP .	Per month	25.00	25.00	25.00	50.00	50.00
(b) 3.5 HP to 5 HP ..	Per month	25.00	25.00	25.00	66.00	66.00
(c) 5.5 HP to 8 HP ..	Per month	25 00	25.00	25.00	82.00	82 00

SEED SUPPLY

The first essential for stepping up agricultural production was a programme of multiplication and distribution. Prior to liberation of the district local varieties of paddy like, *azgo, cusalgo, xitto, corgut* and others were cultivated on a large scale. Their yields ranged from 1,000 to 2,000 kgs. per hectare. Since this was considered inadequate, improved varieties of paddy like PTB-10, MTU-20, Patni-5, and Chinsura-8 were introduced in 1963. Attempts were also made to provide improved seeds for other crops such as ragi, groundnut, pulses, sugarcane, etc. With a view to producing these improved varieties of seeds locally, Government farms were located at Kalay, Chinchinim, and Chimbel besides two farms at Mapusa and Margao already in existence.

Manures

Manures and fertilizers have direct bearing upon the improvement of fertility of the soil and the consequent increase in food production. The Department of Agriculture was the main distributor of fertilizers upto 1968-69. However, with the relaxation of fertilizer control order many private dealers are bringing fertilizers directly from the

manufacturers since 1969-70. The following statement gives the consumption of fertilizers in terms of NPK from 1966-67 to 1972-73 :—

Year	N	P 205	K20
1966-67	1,225	295	49
1967-68	1,016	405	142
1968-69	1,115	643	127
1969-70	1,120	700	200
1970-71	1,094	687	214
1971-72	1,215	770	302
1972-73	1,214	861	366

Various demonstrations and trials in the use of fertilizers and manures were also conducted. The following statement gives the details of demonstrations and trials conducted from 1968-69 to 1972-73 :—

Year	Type of Demonstration						
	Simple Ferti-lisers Trials	Nati-onal Demon-stra-tions	Multi Crop Demon stra-tions.	Soil Condition Demon-strations	Rural Composed Demon-strations	Green Manuring Demon-strations	River Silt Area Covered
1968-69 ..	150	2	12	3	....	....	....
1969-70 ..	....	2	....	...	....	...	586 ha.
1970-71 ..	186	2	38	190	....	55	349 ha.
1971-72 ..	192	25	78	185	350	254	1,001 ha.
1972-73 ..	..	25	107	254	700	526	859 ha.

PESTS AND DISEASES

The most common pests and diseases on different crops in the district of Goa are as follows :

(1) Paddy .. Army worms, leaf roller, bacterial blight, silver shoot, case worm, blasts, grasshoppers.

(2) Coconut ... Nephantis, serinopa, bud-rot, rhynoceras, beetle, steam-rod.

(3) Mango ... Powdery mildew, stem-borer, mango hoppers, sooty mould.

(4) Cashew ... Mite, tea mosquito.

(5) Arecanut ... Koleroga.

(6) Vegetables and pulses Fruit borers, pod borers, stem borers, leaf eating caterpillars, mites, aphids, tribs, mildew, fruit-rot, cut worm, powdery mildew, douny mildew, hairy caterpillars.

Paddy

Army worms : *Lushkari Alya,* the swarming caterpillars (spodoptera mauritia B.), are active mostly during night time. Annually, about 500 acres under paddy are affected by this pest. In 1953-54, *kharif* paddy was seriously attacked by this pest. But owing to timely measures taken to combat it, a major portion of the crops could be saved. Another serious infestation experienced by the *rabi* crop in 1954, was mostly confined to Sawantwadi taluka. Crops over about 700 acres were damaged. However, owing to the efforts of the Department of Agriculture and Co-operation on the part of the people, about 75 per cent of the crops were saved. Caterpillars are dark green with a slight yellow tinge. The pest can be controlled by (1) protecting the seed-beds by deep trenches, (2) collecting the egg masses by hand, (3) trapping the caterpillars under plants or small bunches of grass during the day time, (4) ploughing the fields after harvest to expose the pupae, (5) flooding the affected patch and dislodging the caterpillars from the plants by means of a rope, (6) dusting in the evening, five per cent Benzene Hexachloride (BHC) at the rate of 20 lbs. to 30 lbs. per acre, (7) spraying about 60 gallons to 100 gallons per acre of 50 per cent (BHC) (water dispersible) at the rate of 5 lbs. in 100 gallons of water.

Grasshopper : *Bhatavaril tol,* the paddy grasshopper (*hierglyphus banian Fb.*) : both the nymphs and adults eat the foliage and also feed on the developing earheads of paddy. If the pest occurs every year, fields are ploughed after the harvest. Dusting infested fields with five per cent BHC at the rate of 20 lbs. to 30 lbs. per acre may also be tried.

Blasts : *Karpa* or the blast of rice (*Piricularia Oryzae*) is the most destructive of these. It is reported to have made its first appearance in an epidemic form in 1946 in the southern districts of the former Bombay State. Damage due to this disease has not been assessed, but it is estimated to be in the neighbourhood of 15 per cent to 20 per cent of the total crop production. As yet no permanent method of control has been devised ; seed treatment and spraying with Bordeaux mixture in the proportion of 3 : 3 : 50 has been recommended as a temporary control measure. However, the work of evolving blast resistant varieties is in progress.

Case worm : *Suralyantil ali,* the rice case worm, (nymphula depunctalis G.). The caterpillars cut the paddy leaves into short lengths, construct tubular cases, remain inside such rolls and feed on the foliage. The pest is controlled by (i) removal and destruction of tubular cases, (ii) rope dragging to dislodge the caterpillars after flooding the crops (a little quantity of crude oil is added to the fluid), (iii) dusting BHC

at the rate of 15 lbs. to 20 lbs. per acre, (iv) spraying one pound of pyrethrum in 60 gallons of water or seven to eight pounds of D.D.T. 50 per cent (water dispersible) in 100 gallons of water.

Coconut

Rhinoceros beetle : (*Oryetes rhinoceros*) is indeed a serious pest of coconut. Annually, it affects nearly fifty per cent of the area under this crop, though the extent of damage done varies between 20 per cent and 30 per cent of the area of infestation. The beetle bores into the tender part, biting the fibrous portion. The tree may begin to wither and ultimately die. The pest is controlled by treating the breeding places every two months with manure dumps or compost pits with 0·2 per cent BHC (water dispersible) spray. The adult beetles are extracted from the fruit and killed by using a beetle road. The beetle holes and the inner leaf-axils are filled with sand and five per cent BHC dust in equal parts.

Bud rot : *Shenda Kujne*, the bud rot disease of coconut (*Phytophthora*) is prevalent in the district and causes extensive damage to the coconut cultivation. In this case, leaves begin to drop off. The terminal bud rots and ultimately the plant is killed. The only remedy is to cut down the affected plants and burn them. If only outer sheaths are affected, these may be removed and the crown sprayed with one per cent bordeaux mixture. If the disease is far advanced and the recovery impossible, the entire crown may be cut down and burnt. As a measure to guard against tthe spread of disease, trees surrounding those affected should also be sprayed with one per cent bordeaux mixture.

Mango

Powdery Mildew : *Bhuri*, the powdery mildew of mango (*Oidium Magniterde*) occurs on blossoms and results in poor setting of fruits. When young fruits are attacked, they wither and drop down. *Bhuri* is usually accompanied by jassid hoppers, an insect pest. Both cause serious damage to the crop. However, they can be effectively controlled by dusting the blossoms with a mixture of 200 mesh-fine sulphur and five per cent DDT dust in the proportion 1:1 or 1:2 depending upon severity of jassid attack. Dusting should be given first, when blossom is complete and followed by second application after a fortnight. Normally, two dustings should suffice, but sometimes a third one may also be found necessary. The cost of dusting works out to about two rupees per tree.

Stem-borer : *Ambyavaril bhirud*, the mango stem-borer (*batocera rubus L.*) : The grubs bore and tunnel through the stem exuding masses of refuse. The branches may collapse and the tree may wither.

An injection of borer solution (carbon disulphide two parts, chloroform one part and creosote one part) is recommended to control the pest; the hole is closed with mud after the injection is given.

Mango hoppers: Ambyavaril tudtude, jassid hoppers (*idiocerus atkinsoni L., idiocerus nivcosparsus L., idiocerus clypealis L.*) are a pest which cause damage to the flowers during flowering season. Nearly 50 per cent of the area is infested. The damage, however, varies between 20 per cent and 30 per cent. The nymphs and adults suck the sap of the tender leaves and flowers and thus reduce the bearing of fruit. They also secrete a sugary substance called honey-dew permitting a sooty mould to develop. The pest is effectively controlled by the fortnightly application of five per cent D.D.T. sulphur dust.

Plant protection

The following is the plant protection schedule followed on different crops :—

1. Paddy ...	Dimecron 100. B. H. C. 50 per cent.	200 per ha. every spray or 2 to 3 kgs. per ha. per spray.
	Dithane Z-78.	2 to 3 kgs. per ha./spray.
	Copper Oxychloride.	1·25 kgs./ha./spray.
2. Mango ...	Dimecron or	250 cc./ha./spray at flowering stage.
	D. D. T. 50 per cent.	2 to 3 kgs. per ha. per spray.
	Cosan.	500 gms. per ha. per spray.
3. Cashew ...	B. H. C. 50 per cent. or D. D. T. 50 per cent.	2 to 3 kgs./ha./spray.
4. Onion and Chillies.	Dimecron 100. Dithane Z-78.	250 cc. per spray/ha. 2 to 3 kgs.
5. Vegetables.	Dimecron 100	250 cc. per spray, per ha.
	Dithane Z-78 or	2 to 3 kgs. per spray/ha.
	Cuman.	500 gms. per ha./per spray.
In case of Epidemic.	Nuvan 100 Ec.	250 cc. per ha., per spray.

ANIMAL HUSBANDRY

Live stock

The animal husbandary and veterinary services sector was the most neglected sector during the erstwhile regime. The scope for stock raising was then limited to some extent due to political and economic

conditions prevailing at that time. Live stock, particularly bovines, constitute one of the coveted possessions of the farmers. The peculiar physical features of the district leave little scope for the use of mechanical devices for agricultural operation and this makes agriculturists to rely upon cattle labour. A pair of bullocks for draught, a cow or buffalo for milk, draught and manure and a few sheep, goats and poultry are commonly found with agriculturists. Aid of livestock is a must for economic farming. As per the livestock census count of 1972, the livestock population of the district was 2,21,769. Information on livestock population of the district, talukawise, as per the Eleventh Quinquennial livestock Census in 1972, is given under Appendix. 7.

The district does not have well-known breeds and the local cattle is of a non-descript type. As regards fodder and cattle-feed, it will be found that stalks and residues of agricultural crops such as paddy, nachani and pulses, leaves of sugarcane, banana trees, branches of sweet potato, etc. provide excellent food material. From the savannah lands of Pernem, to the marshy deltaic regions of Tiswadi and Salcete, from the dunic formations of the coast to the dense tropical forests of the interior, everything is green growth most of which is good for cattle feed.

Rearing of pigs provide additional source of income to agriculturists. As can be seen there are in the district 51,666 pigs. Pork has a good demand in the district and that is how this has become a subsidiary occupation of the agriculturists.

Poultry

Poultry consists of fowls and ducks valued particularly for the flesh and eggs, the products that have good demand in the market. Poultry does not require to be attended to by special care since the birds can be let loose to pick their food in a backyard or on a dunghill and during the night kept in wooden caskets and cupboards (ghuds).

Poultry farming which requires small investment, provides a subsidiary occupation to a number of agriculturists. Statistics regarding poultry in the district as per the Eleventh Quinquennial LiveStock Census held in 1972 is given under Appendix 8.

FISHERIES

The district has a coastline admeasuring 100 kilometres and inland waterways of 250 kilometres, besides a number of small tanks covering an area of 100 hectares. Nature has endowed the district with considerable marine and inland fisheries potential. The coast is full of creeks and estuaries formed by seven major rivers *viz.* Tiracol, Chapora, Mandovi, Zuari, Sal, Talpona and Galjibaga which provide good shelter for the fishing craft. The coastal and inshore waters are

known to be very rich in fishery resources especially because of the huge shoals of mackerel and sardines which regularly visit the shores during the fishing season and yield abundant catches. The fishermen population is estimated at about 24,051, out of which 5,258 are active fishermen spread all over the district. Most of the fishermen are engaged in small boat fishing.

Techniques of Fishing

Marine fishing is carried on with five main types of fishing techniques viz. (*a*) operation of beach seines (*b*) Gill net fishing in off-shore waters (*c*) Cast net fishing in shallow waters (*d*) Seasonal hook and line fishing (*e*) Mechanised fishing.

A fishing boat is essentially an important equipment in fishing and rightly plays a major role in the development of the fishing industry. The fishermen community in Goa is found to be conservative minded, always believing much in their age-old traditions. A scheme for the mechanisation of fishing craft has been introduced in the district and to begin with, the Department of Fisheries got 22 mechanised fishing boats of different sizes constructed to suit the local fishermen.

Canning and Freezing

There are four canning plants in Goa at present which can fish. The raw material is available to these plants in sufficient quantities and at reasonable rates only during the mackerel and sardine fishing season. Over 96 per cent of the total fish and fishery products canned are that of mackerel and sardines during the four months of the fishing season. These plants have also started canning of prawns only in recent years. They depend for this raw material both on the local catches and catches from neighbouring places like Ratnagiri and Karwar.

Though there existed two cold storage plants prior to liberation of this Territory, they were not suitable for storing frozen fish. It is only in the year 1965-66, these plants were renovated and made suitable for storing frozen fish.

Financial Assistance

The Fisheries Department of the Government of Goa, Daman and Diu has framed a number of schemes which render financial aid to fishermen in the form of loans and subsidy for marine diesel engines, construction of hull, purchases of fishery requisites such as nylon twine, cotton twine, hemp twine, diesel oil, etc. The terms and conditions governing the financial assistance are governed under the 'State Aid to Fisheries Rules, 1963'. The loans granted to fisherfolk are repayable within a period of seven years in twenty-one quarterly instalments. Loans are granted on the basis of security valued at

33 1/3 per cent. excess over the loan amount. Loans and subsidy are granted as below :

1. Construction of hull : (i) 50 per cent loan.
(ii) 25 per cent subsidy (on the cost of the hull to be evaluated by the Departmental Officer).

2. Purchase of engines : (i) 50 per cent loan.
(ii) 40 per cent subsidy (on the cost of the engine).

The following statement reveals the amount of loans and subsidy granted towards mechanisation of fishing craft from 1963-64 to 1971-72.

Year	Loan	Subsidy
	Rs.	Rs.
1963-64	91,155·00	73,105·00
1964-65	1,91,121·00	1,58,857·25
1965-66	2,69,030·00	2,19,588·10
1966-67	5,49,903·00	4,95,722·05
1967-68	4,85,985 76	3,38,287·80
1968-69	1,88,400·00	1,88,400·00
1969-70	1,04,720·00	1,21,900·00
1970-71	3,43,867·50	3,17,907·00
1971-72	4,27,085·88	3,41,668·73
Total ..	26.51,268·16	22.55,435·93

In order to improve the socio-economic conditions of fisherfolk and to lessen their dependence on middlemen for credit, a number of schemes for the development of fisheries co-operatives have been framed under which financial aid in the form of managerial subsidy, short and medium term loans and Government contribution towards share capital of the society is given. At present there are 8 fisheries co-operative societies functioning in the district. The details of membership, share capital and financial assistance in respect of these different fisheries co-operative societies are given in the following table.

TABLE No. 6.—FINANCIAL ASSISTANCE TO FISHERIES CO-OPERATIVES IN GOA DISTRICT

Name of the Fisheries Co-operative Society	Registration No. and date	Member-ship	Share capital	Government share capital contribu-tion	General purpose loan	Loan for mechanised boat	Subsidy fcr mechanised boat	Managerial subsidy
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Harmal (Arambol) Fisheries Co-operative Society Ltd., Arambol-Pernem.	GEN(C)-51/Goa, dated 30th June 1963	152	1,900.00	1,030.00	15,000.00	20,894.00	10,481.00	851.29
Kaisua Fishery Co-operative Society Ltd., Colvale-Bardez.	GEN(C)-15,Goa, dated 19th July 1965.	212	4,222.00	3,000 00	..	39,110.01	24,279.05	..
Bardesh Fisheries Co-operative Societies Ltd., Verem-Betim.	GEN(C)-6/Goa, dated 30th April 1964.	139	8,510.00	7,557.00	..	20,894.00	10,481.00	416.60
Dona-Paula Fisheries Co-operative Society Ltd., Dona-Paula.	GEN(C)-9/Goa, dated 30th September 1964.	78	1,240.00	..	.	....	..	..
Durbhat Fisheries Co-operative Society Ltd., Ponda.	GEN(C)-2/Goa, dated 19th March 1963.	139	2,340.00	2,160.00	3.173.00	20,894.00	10,481.00	1,291.66
Murgaon Fisheries Co-operative Society Ltd., Mormugao.	GEN(C)-14/Goa, dated 30th April 1965.	262	7,310.00	..	..	....	..	..
Asolne Fisheries Co-operative Society Ltd., Assolna Salcete	GEN(C)-10/Goa, dated 8th October 1964.	158	2,220.00	1.400.00	5,000.00	39,110.01	24,279.05	615.00
Kankon Bhag Machinary Sahakari Society, Canacona.	GEN(C)-1/Goa, dated 2nd March 1963.	484	3,145 00	2,980.00	15,000.00	20,894.00	10,481.00	988.88
	Total ..	1,624	30,887.00	18,127.00	38,173.00	1,61,796.02	90,482.10	4,127.43

The Co-operative Societies at Arambol, Caisua, Betim-Verem, Durbhat, Assolna and Canacona are operating mechanised fishing boats allotted by the Department of Fisheries on loan-cum-subsidy basis. All these societies run fair-price shops mainly dealing with fishing accessories which are made available to the fishermen members at reasonable rates. Short and medium term loans are made available to these societies to enable them to conduct their activities smoothly. In addition to this, the Government have also rendered matching share capital contribution and managerial subsidy to these societies. In order to preserve the fish, the Department of Fisheries has maintained an Ice Factory which supplies ice at concessional rates to the fishing community.

FORESTS

Of the total geographical area of 3,61,113·6 hectares, an area of 1,05,294·8 hectares representing 29·16 per cent. of the geographical area is under forests. Forests are mainly confined to the eastern portion of the Western Ghats in the foothill slopes of Satari, Sanguem, and Canacona talukas. Scattered in patches are several private forests owned by the village communidades, temples and private individuals that cover an area of 256 sq. kms. of which a sizeable area is covered by the *mocasa* or *inam*, granted to the Ranes of Satari and Bicholim by the ex-Portuguese regime.

In Sanguem taluka, an area of 50,070 hectares corresponding to 56·47 per cent. of the geographical area of the taluka is under the control of the Forests Department. The taluka consists of two forest ranges namely Sanguem and Colem with about equal proportion of forest area. The forests in these tracts are of great importance to the forest exchequer. In Satari taluka, the forest area of 24,252 hectares accounts for 47·29 per cent. of the total geographical area of the taluka. These forests are mainly confined to the hill slopes. At Redghat and Birondem exist teak plantations covering an area of about 100 hectares raised by the Portuguese Military Commander during the period 1922-1930. A major portion of valuable forest area is located in the valley of Codal, Krishnapur and Sancordem bordering the Karnatak State. The total forest area in Quepem taluka has been estimated to be 11,679 hectares i.e. about 33·63 per cent. of the land area of the region. This taluka has extensive forest area in the charge of different Communidades. In Canacona taluka, forests covering 14,328 hectares come to 41·25 per cent. of the total geographical area of the taluka. These forests are quite valuable and are considered as high forests particularly at Cotigao and zambaulim. These thickly wooded forests in an area of about 10 to 15

square miles, border the North Kanara district of the Karnataka State. The taluka has also a vast forest area under *Communidades* which were owned once by the King of Saunde. In the Bicholim taluka, only 3 per cent. of the total area i.e. 716 hectares is under forests. The private forests particularly at Maulinguem, Nanora and Naroa are all covered with cashew groves. In Ponda taluka, forests cover an area of 2,931 hectares which account for 11·62 per cent. of the total area of the taluka. The portion of the forest area at Betora, Nirancal and Shiroda bears moderate type of timber trees. The Pernem taluka has a forest area of 1,319 hectares and it forms about 5·4 per cent. of the total geographical area of the taluka.

Forest Produce

The important minor forests produce of the district are bamboos, canes, maretha bark, chillar bark, *bidi* leaves, and bhirand fruits. Honey is also occasionally found. Besides, there are a number of medicinal trees in the forest

The principal forest products during the years 1973-74 and 1974-75 are as follows :—

Reserve Forests	Year*	
	1973-74	1974-75
1. Timber production (cu. mts.)		
(i) First class	508	618
(ii) Second class	8,031	17,169
(iii) Third class	3,543	9,481
2. Fuel production (cu. mts.) ...	1,62,875	2,14,268
3. Pole Production (No.) ...	59,906	74,975

*Provisional figures.

The revenue realised of forest products for the year 1973-74 and 1974-75 was Rs. 35,48,000 and Rs. 61,88,000 respectively.

STATE ASSISTANCE TO AGRICULTURE

Indebtedness is perhaps the most important problem of the rural area in the agricultural sector. To prevent an agriculturist from sliding back into his original state of indebtedness, it is necessary to make him economically solvent. One measure to achieve this is to provide him with credit adequate in quantity and beneficient in operation. Due to the paucity of financial assistance he could do little to increase productivity. With this in view, the Government have rendered financial aid to needy peasants from the year 1963 onwards, mainly under the Land Improvement Loans Act of 1883 and the Agriculturists Loans Act of 1884.

Land Improvement Loans Act of 1883

Under this Act, loans are granted to the needy cultivators of the district for works of improvement on land such as fencing, clearing, levelling, contour bunding, terracing, construction of wells, tanks, cattle sheds, farm houses, store houses, boundary walls, irrigation channels, installation of pump sets for irrigation, etc. for agricultural purposes. The Director of Agriculture and the Block Development officers are authorised to grant loans upto a specified limit. The loans bear a simple interest as fixed by Government from time to time. Generally, immovable landed property is demanded as security against loans to be advanced.

Agriculturists Loans Act of 1884

Under this Act, loans are granted to cultivators holding arable lands as long and medium term loans and short term loans.

Long and Medium Term Loans

Long and medium term loans are granted for the work of planting, rearing or rejuvenation of coconut trees, arecanut trees, cashew trees, fruit trees and fruit plants, sugarcane and banana cultivation, for the purchase of implements and machinery and work animals. The rate of interest, the type of security and the terms and conditions of the grant of loans are the same as under the Land Improvement Loans Act 1883.

Short Term Loans

Short term loans are granted under the Agriculturist Loans Act 1884 to needy cultivators for purchase of manure, seeds, insecticides and equipment, etc. The applicant has to offer, as security for the loan, the crops to be raised, and one personal surety, solvent to the extent of one and one-third of the amount of loan applied for. The terms and conditions and the rate of interest are the same as those for loans under the Land Improvement Loans Act, 1883.

The following statement shows the extent of Government assistance under the above Acts in the Goa district :—

Year	For wells	For land improvements	Total
	Rs.	Rs.	Rs.
1963-64	...	1,57,115·48	1,57,115·48
1964-65	...	...	...
1965-66	11,000·00	59,500·00	70,500·00
1966-67	8,400·00	4,89,462·00	4,97,862·00
1967-68	23,250·00	9,39,665·00	9,62,915·00
1968-69	...	8,58,233·00	8,58,233 00
1969-70	...	5,03,248·00	5,03,248·00
1970-71	6,210·00	7,08,835·00	7,15,045·00
1971-72	...	8,15,209·00	8,15,209·00

FLOODS AND FAMINES

"Goa is seldom visited with great floods. Some of its provinces, indeed, occasionally suffer from partial inundation, especially during heavy rains, but no great damage results therefrom to the crops. In times of drought the agricultural classes sustain heavy losses, but the people at large are supplied, though at great cost, with rice from British territory. It is only when a famine occurs in these territories that palpable signs of distress are visible amongst the inhabitants of Goa. Formerly this country suffered frequently from famines; the year 1553, 1570 and 1682 particularly are said to have been seasons of great scarcity."[1]

A lot of damage to the crops in the district was caused by locust plague in the year 1900-1901. Though floods are not common, the river Sanquelim always breaches its embankments at Sanquelim and causes considerable damage. The Government have already prepared a scheme of flood control.

"Existing knowledge shows that in Goa, farmers have always taken good care of their lands. *Nalas* were built and water courses trained in order to drain the flood waters in monsoon. Along the riverside, strong embankments were built to protect the low-lying areas from inundation by saline waters. Sluice gates were built, where necessary, to allow flow of flood waters and prevent the ingress of saline waters. As the monsoons were very heavy, a close watch had to be kept on these works. They realised that unless a breach is immediately closed, the damage to the existing structure along the river would increase. Systematic desilting of *nalas* and riversides was done to ensure drainage. It should be noted that these works mostly affect the *Khajan* and *Cantar* lands. As the ownership of most of the *Khajan* lands is vested in Communidades and relatively big land owners, they had the means to look after these repairs.

In the last 10 years, this picture has changed. The mining activity not only raised the wage level, making it difficult to look after the repairs, but created fresh problems as well. Indiscriminate cutting of the forests in mining areas and the resultant uncontrolled erosion during the monsoon heavily silted the *nalas*, rivulets and also the rivers, thus making the drainage problem more serious. As it is, the *nalas* were not desilted for the past 20 years. To make matters worse, the small patches of land formed along the riversides were usurped by the land-owners and added to their property. Desilting operations were rendered difficult owing to the complicated property rights. The serious nature of this problem can be seen at Santana-Curca and Merces-Calapur

[1] Fonseca J. N. da. *Sketch of the city of Goa*, p. 29.

villages in Goa taluka near the Zuari river and also at Candolim in Bardes taluka.

The worst affected area is in Salcete taluka wherein the Rio de Sal flows. The railway line, which runs through the upper reaches of this river, was constructed without providing for drainage courses. Heavy rainfall coupled with higher tidal movements inundates all the low-lying areas along the river. Gradual silting has changed the river course, aggravating the problem in the last 15 years. Over 1,000 ha. of good rice land has remained fallow. Obviously in such cases, the mining industry is not to be blamed entirely, as the desilting work was in arrears for the considerable time.

In Ponda and Goa talukas, some of the tanks have been badly silted, restricting the irrigated area. *Nalas* have also changed courses, ruining the best rice lands.

The heavy barge movements along the main river systems of Goa (Rio de Mapussa, Mandovi and Zuari) resulted in a constant hammering of the embankments. The frail structures which were not designed to take such a heavy load gave way, flooding the low lying rice fields. Areas in Bicholim, Bardes, Salcete, Ponda and Goa were the worst hit. On a very conservative estimate, the total damage done to the rice lands is : 3,000 ha. have become completely fallow, and, in 8,000 hectares the yields have gone down by 50 per cent.

Silting is a continuous and long-term process, a small area being lost every year. Obviously, the impact is not as great as caused by the breaches in the embankments. The *communidades* and the concerned land-owners were helpless in the face of this great damage. They had neither the resources nor the technical knowledge to meet the situation. Besides, as income from agriculture formed a very small proportion in the total incomes of the land-owners and members of the *communidades*, they did not pay much attention and handed over the responsibility to the tenant-cultivators.

The resulting discontent at last awoke the then Government and attempts were made to reorganize the Agricultural Department. A commission for embankments was established in 1959-60 and a technical brigade was organized to execute its decision. In 1959-60, 764 hectares were reclaimed at a cost of Rs. 6,00,000 thus saving a crop of about 15,000 *candies*. In 1961, about Rs. 2,34,400 were spent and 195 ha. reclaimed. The additional production is estimated at 3,345 *candies*. However, the officials of the department having more of enthusiasm and less of technical knowledge and organizational ability could do much. Thus, about 11,000 hectares of land have been lost for cultivation during the last decade.

The Government announced a 30 per cent. subsidy on permanent improvement works and raised it to 50 per cent. in 1958-59 for areas affected by barge movements. The remainder was treated as a loan to be paid in 10 to 15 instalments bearing a low interest rate of 2 per cent. In one year alone the then Government spent about Rs. 6,00,000. Even with this expenditure, very little was achieved, as there was no organization to keep constant vigilance. Embankments have to be specially guarded during December, February, March and June when the tidal waves are at their highest (i.e. about 8 ft.). The normal height reached is about 5 ft. However, in the last three to four years, the experience is that the waves rise one foot above the level indicated by the Navigation Department.[1]

[1] Techno-Economic Survey of Goa, Daman and Diu, pp. 33-35.

* * *

CHAPTER 5—INDUSTRIES

The economic well-being of the population of a district, or for that matter, of a country, depends upon the availability of the means of livelihood like agriculture, industry, trade, transport and such other means which are in the form of services and sales essential to maintain a certain standard of living. As in the rest of the country, in the district of Goa too, agriculture still continues to dominate the economic structure. As per the Census of 1971, of the total population of the district of 7,95,120 a population of 2,54,475 has been enumerated as workers. Of the population enumerated as workers, as many as 1,09,311 that is, 42·95 per cent are engaged in agriculture as cultivators, agricultural labourers and in livestook rearing, forestry, fishing, hunting and plantation orchards and allied agricultural activities. As against this, only 46,949 persons giving a percentage of 18·45 to the population enumerated as workers, are engaged in mining and quarrying and industries. With the ever-increasing population, the economic development of the district can take place only with the shift in emphasis from agriculture to other economic activities that would provide avenues of employment to more and more persons and such economic activity can be nothing less than the industrial development of the district.

The industrial development of any territory is to be viewed against the background of the availability of factors of production that is, land, labour, capital and organisation as also the development of the infra-structure required to promote industrialisation and encouragament given to the rapid pace of industrialisation by the State, specially so when it is a welfare state. As regards the availability of factors of production, it must be stated here that land and labour were and still are available in plenty. The district is endowed with natural resources. Labour, though not skilled or semi-skilled, was also available. However, immediately after Liberation it was thought prudent to introduce training programmes for labourers and artisans. Subsequently, such programmes were introduced in the district. " The work force expected to be available from 1970-80 is 4,15,300. Of these, agriculture may absorb 1,45,000 persons. There will be in other occupation 2,70,000 but the fresh addition to the work force during 1970-80, it is estimated, will be 70,000. Of these, 40,000 will be matriculates, 5,000 graduates, and 1,000 engineers. This means, each year the work force will be augmented by 7,000 persons including 4,000 matriculates, 500 graduates and 100 engineers."

About capital, it is definite that it was available in plenty. However, there was complete lack of organisational skill and willingness to undertake risks involved as the economy of the district prior to Liberation was trade oriented. The position changed after Liberation and now the entrepreneurs are prepared to undertake risks and start new industrial units in the district.

Viewed against this background, it is evident that the pace of industrial development of the district was very slow, and can be even termed as static. Prior to Liberation there were no large and medium scale industries in the district and the only major economic activity was confined to mining of iron and manganese ore. There were a few small industrial units covering the field of engineering and automobile workshops, tyre retreading, soap manufacturing, saw mills, printing presses, cashew-nut processing, fruit canning and barge repairing, etc., besides a few service industries like rice, flour and oil mills. The slow progress of the industrial development of the district, is to be mostly attributed to the Portuguese apathy towards industrial development except mining. The Portuguese regime neither encouraged the industrial development of the district, nor were industrial units set up on their own given any facilities by the Government. On the other hand, certain restrictions were imposed on starting even small and cottage industries. Similarly, no protection was granted to the indigenous products because of the liberal import policy of the Government at the cost of indigenous industrialisation. In a nut shell, it can be stated that the Portuguese regime did not care to erect infra-structure to develop the industrial base of the district. The lack of industrial development of the territory prior to Liberation can mainly be attributed to the long spell of foreign rule. The necessary infra-structure required for starting industries on a large scale such as power, water, communications, etc., was almost lacking. The market for the industrial products was also limited. After Liberation, Goa could no longer afford to continue to depend on trade oriented economy and it was therefore necessary to create a suitable climate for industrialisation and to provide an infrastructure required for establishing new industrial units.

In respect of communications it can be stated that the distric has several modes of communications namely, railways, roads, inland and sea navigation and air transport. The rail mileage being very meagre and inadequate, the economy of the district is mainly dependant on road transport system coupled with inland navigation. The road transport system in the district serves as a feeder to inland water transport in the movement, specially, of iron ore. The district has fairly good roads. The length of surface roads increased from 2,639 kms. prior to Liberation to 4,384 kms. by 1972-73. The length of surface roads per thousand square kilometres of area increased by about fifty

per cent from 713 kms. to 1,035 kms. during the same period. The district has been well-connected with the neighbouring states of Maharashtra and Karnataka. It is connected with Bombay by road, rail, sea and air. It has 270 kms. of navigable waterways with ports like Tiracol, Polem, Colvale, Panaji, Betul, Talpona, etc. Mining still continues to be the major economic activity of the district and no mine in Goa is located within a range of 40 kms. from Mormugao Port by land. The river transport in Goa is the major factor in keeping the transportation charges to the minimum. Sanvordem creek also provides navigational facilities for ore movement in the district.

As regards water supply, the position appears to be somewhat tight and shortage of water is already experienced to some extent. The present capacity of Opa Water works is six million gallons per day. The requirement of water by 1985 is estimated at 18 million gallons per day. However, it must be stated that attempts are being made to meet the water requirement of various industrial units to the maximum extent possible. This aspect of the infra-structure was particularly neglected by the Portuguese authorities and whatever development in this respect is to be seen, has come only after Liberation.

Power

In regard to power supply it can be stated that prior to Liberation there were in the district, few isolated generating stations. The power supply was so scanty that only six towns and a few villages in the district had the benefit of the same. The aggregate power demand in these towns was about 1·5 MW. The electricity generated was mostly utilised for household consumption. The district was badly in need of power development at the time of liberation. After the Liberation of the territory, arrangements were made to attain power from the neighbouring states of Maharashtra and Karnataka. For Goa, bulk supply from Maharashtra to the extent of 2 MVA at 33 KV and from Karnataka to the extent of 0·5 MVA at 33 KV and 10·5 MVA at 110 KV, was arranged. For availing of the 2 MVA supply from Maharashtra, erection of a double circuit 33 KV line with a length of 64 kms. in Goa and 120 kms. in Maharashtra was undertaken. Sub-stations with 1 MVA, 33/11 KV, were constructed at Pernem, Bicholim. Panaji and Ponda. Power supply from Pernem commenced from December 1963, and that from Bicholim, Panaji and Ponda from April 1965. A single circuit 33 KV line with a length of 52 kms. in Goa and 51 kms. in Karnataka and construction of a 10·5 MVA 110/33 KV sub-station at Ponda were completed to avail of 10·5 MVA supply in November 1966.

Power demand in Goa was steadily increasing. From 2·2 MW in 1965-66, it increased to 50 KMW in 1969-70. The consumption of power has increased from 8·5 KWH. during 1965-66 to 106 KWH

during 1970-71. The following table gives taluka-wise information about the rural population and population of villages electrified :—

TABLE No. 1—TALUKA-WISE INFORMATION ABOUT RURAL POPULATION AND POPULATION OF VILLAGES ELECTRIFIED.

District/Taluka	Total Rural Population	Total No. of electrified villages	Population residing in electrified villages	Population residing in electrified villages as a percentage of total rural population
1	2	3	4	5
GOA DISTRICT	5,91,877	136	3,68,883	62.32
Taluka				
Tiswadi . ..	46,551	15	29,125	62.56
Bardez	1,04,102	20	64,390	61.85
Pernem	49,976	15	32,751	65.53
Bicholim . ..	49,839	15	34,807	69.84
Satari	29,593	4	3,833	12.93
Ponda	76,932	18	64,173	83.42
Sanguem	39,582	2	4,665	11.78
Canacona	28,151	2	8,985	31.92
Quepem	38,622	9	24,149	62.53
Salcete	1,07,083	33	90,092	84.13
Mormugao . ..	21,446	3	11,913	55.55

The table shows that the talukas of Sanguem, and Satari have very meagre percentage population living in villages electrified. On the other hand, the talukas of Tiswadi, Bicholim, Ponda, Salcete and Mormugao have high percentages of population living in electrified villages with taluka-wise percentages being 62·56, 69·84, 83·42, 84·13 and 55·55 respectively.

As has already been stated the Union Territory of Goa, Daman and Diu purchases electricity from the Maharashtra and Karnataka Electricity Boards. The following statement gives information regarding energy purchased, generated and sold from 1968-69 to 1972-73.

(In lakhs KWH)

Year	Electricity		
	Purchased	Generated	Sold
1	2	3	4
1968-69	553·50	32·32	512·04
1969-70	638·62	7·18	574·14
1970-71	856·57	—	757·31
1971-72	926·29	—	780·44
1972-73	1,088·95	—	890·81

Electricity purchased or generated was utilised for domestic, commercial, industrial, irrigation and other purposes.

The following statement gives information regarding electricity consumed in the district from 1968-69 to 1972-73 :—

(In lakhs KWH)

Item	1968-69	1969-70	1970-71	1971-72	1972-73
Domestic	29·75	44·46	57·16	74·34	87·18
Commercial	29·98	35·16	41·44	50·80	54·66
Industrial	414·28	416·27	597·22	581·77	638·11
Irrigation	0·13	0·61	0·73	1·07	2·02
Others (public lighting and water works)	37·90	77·64	60·76	72·46	108·84
Total ..	512·04	574·14	757·31	780·44	890·81

The Government always makes efforts to supply powers to the industrial units. It has recently reduced the tariff on electricity from eighteen paise to sixteen paise per unit. However, small scale industries found it difficult to consume power even at this rate, and as such, the Government have reduced tariff for power supply to small scale industries to twelve paise where the collective load does not exceed 100 H. P. Industrial units having collective loads upto 20 H. P. are paid a subsidy equal to the difference between the actual rate paid and nine paise per unit under the rules specially framed for the purpose.

Erection of Sub-Stations

The 90 MVA 110/33/11 KV sub-station at Ponda is completed and commissioned during the year 1971-72 and a new 33/11 KV substation of 3·15 MVA capacity is completed and commissioned during February 1972 at Mapusa. During the year 1972-73 upto December 1972 power supply was commenced to 6 important industries of the district.

Some of the important schemes which have been included for additional load under the Fifth Plan period are as follows:—

(*i*) Erection of 2×100 MVA, 200/110/33 KV sub-station at Ponda.

(*ii*) Erection of 2×63 MVA, 110/33 KV sub-station at Mormugao and

(iii) Erection of 1 MVA, 33/11 KV sub-station at Valpoi.

The following statement gives a picture regarding electricity consumed, number of towns and census villages electrified, per capita consumption of electricity and percentage of industrial consumption to total consumption.

	Pre-Liberation	1974-75
Consumption of electricity in lakh KWH.	78·7	1,207·27
No. of towns/villages electrified as on 31st March 75	13	306
Per capita consumption ..	13	141
Percentage	N.A.	63

Availability of raw materials

For the speedy industrial development of the district, it was essential that there should be regular supplies of raw materials required, and in this field, the Directorate of Industries, Government of Goa, Daman and Diu, and the Maharashtra State Small Scale Industrial Development Corporation, whose jurisdiction attends over the district, played a very vital role. The main activities of the Maharashtra Small Scale Industrial Development Corporation centre around the distribution of raw materials like iron and steel and chemicals like mutton tallow. In the absence of statistics available for the district, the following statement gives yearwise distribution of raw materials for the territory as a whole :—

Year		Industrial Raw Materials supplied	
		Quantity in metric tonnes	Approximate value in Rs. lakhs
1966-67	...	46·745	1·53
1967-68	...	123·340	3·42
1968-69	...	272·219	6·01
1969-70	...	465·098	10·52
1970-71	...	775·376	15·82

The statement clearly brings out that the value of raw materials distributed by the Maharashtra Small Scale Industrial Development Corporation has increased by more than tenfold during the period 1966-67 to 1970-71. During 1970-71, the Corporation distributed sixteen items as against only four distributed in 1966-67.

This chapter is divided into three sections *viz.* large scale industries, other large scale industries and small scale industries, cottage industries and labour organisations. The first section gives information in respect of large scale industries, other large scale industries and small scale industries, mostly registered under the Factories Act. In the second section is given the description of cottage industries. Description of industrial potential and plans, labour organisations and trade union movement in the district is given in the third section.

SECTION I—LARGE SCALE INDUSTRIES

Industrial development being a new phenomenon born with the Liberation of the district, there are very few large scale industrial units. In what follows is described in brief, the functioning of these large scale industrial units.

Mining

Prior to the Liberation of the territory, only a few small industrial units existed in the Territory. The major economic activity of the district was confined to the mining of iron and manganese ore. The district of Goa is richly endowed with industrial minerals like iron ore, manganese ore, bauxite, limestone, dolomite, etc. In addition to this, there are good deposits of refractory clays, ilminite sands, steatite, silica sand, felspar, graphite, talc, quartz, soap stone, etc.

Iron, manganese, bauxite, high magnesia, limestone and clay are the chief minerals of economic importance found in the district. The estimated indicated reserves of recoverable iron ore is about 58 per cent, iron content is to the order of 405 million tonnes. Similarly reserves of black iron ore and manganese ore (average Mn content of 38 per cent) are about six lakh tonnes and twelve lakh tonnes respectively. The reserves estimate for washed clay is about one to three lakh tonnes. Certain clay is suitable for the ceramic industry and the rest can be used as refractory material. Aerial surveys have led to the discovery of bauxite and a luminous laterite in some northern parts of the district. Huge reserves of bauxite have also been reported in the southern part of Goa.

In the year 1905, a few French and German Companies had carried out prospecting for iron and manganese ore in Goa. The outbreak of the First World War brought the mining operation in the district virtually to a stop. However, they were resumed in 1947. It marked the beginning of the development and export of iron and manganese ore. For the purpose of blasting, the use of ammonium nitrate was first introduced in the district in the year 1949, which was thus started much earlier than in other parts of the country.

The district of Goa is well served by two navigable rivers namely the Mandovi and the Zuari which pass through the iron ore and manganese ore bearing areas and join the sea near Mormugao harbour. This inland waterway system is considered a boon to the mining industry in Goa. It not only facilitates the speedy movement of mineral ore from the interior to the port but also helps in reducing the cost of transportation of the ore. These two rivers with the Cumbarjua canal provide facilities for cheap transport by barge of

mineral ore from respective mines to the harbour, where the ore is loaded on ships for export.

The bigger mines are operated partly mechanically and partly manually. Out of 654 mines in operation, about 300 were working as on January, 1974. The following statement gives the number of mines operated in Goa during the year 1974. These mines provided employment to about 32,000 workers in 1973.

	Existing	Working
Iron ore and Manganese ore	628	284
Bauxite.	5	5
Silica sand, quarts	21	11
Total ...	654	300

As mining still continues to be an important aspect of the economy of the district, it will be worthwhile to consider trends in the mineral production in the district. The following table shows trends in mineral production and its value in the district from 1952 to 1970.

TABLE No. 2—MINERAL PRODUCTION AND ITS VALUE

Year	Iron Ore		Manganese Ore		Ferro-Manganese Ore	
	Production (In lakh tonnes)	Value (Rs. in lakhs)	Production (In lakh tonnes)	Value (Rs. in lakhs)	Production (In lakh tonnes)	Value (Rs. in lakhs)
1952	4·86	N.A.	1·11	N.A.	N.A.	N.A.
1953	9·44	N.A.	1·51	N.A.	N.A.	N.A.
1954	13·81	N.A.	1·06	N.A.	N.A.	N.A.
1955	22·11	148·31	1·36	39·54	N.A.	N.A.
1956	25·45	195·00	2·02	83·49	0·32	4·17
1957	29·48	221·17	1·46	75·16	0·49	6·57
1958	29·35	282·08	0·78	35·54	0·25	3·24
1959	30·74	288·75	0·76	26·42	0·34	7·10
1960	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1961	63·95	564·11	0·49	11·59	1·21	13·22
1962	61·30	596·79	0·82	18·59	3·19	44·27
1963	47·69	436·27	0·47	8·45	3·03	28·26
1964	54·84	481·73	0·40	11·08	0·84	14·62
1965	59·39	600·59	0·19	6·44	0·92	13·66
1966	61 59	564·15	0·07	4·44	0·68	11·53
1967	60·42	584·07	0·10	5·20	0·28	5·21
1968	52·50	753·92	0·02	0·87	0·32	6·81
1969	76·56	N.A.	1·73*	N.A.	N.A.	N,A.
1970	87·78	N.A.	2·03*	N.A.	N.A.	N.A.

* Includes ferruginous Manganese ore.

It may be pointed out that mining in the district of Goa has developed under the control and guidance of the mining department. Even though prospecting of iron and manganese ore was started in Goa as early as 1905, it was only in the year 1941 that a sample consignment of 1,000 tonnes of iron ore was made to Belgium. Regular export of iron ore from Goa was started only in 1947 and most of it was exported to Japan. The speedy development of mining activity in Goa has to be attributed to a very liberal policy in respect of granting of concessions and also due to low taxation of minerals and nominal import duty on mining machinery.

Under the Mines and Minerals (Regulation and Development) Act, 1957, 260 Certificates of Approval, 20 prospecting licences and 36 mining leases were granted by the end of May 1970.

Transport of ore from mines to jetties is done by road in rear dumpers from distances ranging from 5 kms. to 50 kms. In one case, a ropeway of 3·8 kms. in length is used. It transports about one million tonnes of iron ore per year.

All the iron and ferro-manganese ore produced in Goa is exported to Japan and some European countries. The foreign exchange earnings by way of this export are of the order of Rs. 30 crores. Manganese ore of high grade is either utilised locally or despatched to the neighbouring States.

Bauxite is partly exported and partly despatched to other States for local usage. There has been a good foreign demand for the Goan bauxite above the grade of 54 per cent A-120. Bauxite was first exported in the year 1969, the total export being to the tune of 33,600 tonnes.

The export trade is channelled through private exporters as well as the Minerals and Metals Trading Corporation of India Ltd., a Government of India undertaking.

Export to the East European countries is handled by the Minerals and Metals Trading Corporation Ltd. All the private exporters own captive mines, the production from which accounts for 30 per cent to 90 per cent of their commitments. They meet the rest of their requirements from small mine owners. In recent years, the export of iron ore fines is on the increase.

Goan silica sand extract from the sea beach areas is useful in moulding due to its fineness.

Based on high grade iron ore fines, a pelletisation plant of half million tonnes annual capacity is working since 1970. It is owned by Messrs. Chowgule and Company Private Limited, and is located at Pale in Bicholim taluka. Pellets produced in the plant are exported to Japan. The main requirements of such a plant are limestone,

water, electricity and furnace oil. Limestone is available in Satari taluka and the electricity has been made available from the neighbouring States.

Based on high grade manganese ore, a potassium permanganate plant with an annual capacity of three thousand tonnes is working since 1969. It is owned by Messrs. Curti Chemicals and is located at Curti near Ponda.

The number of mines in operation in the district has dwindled from 205 in 1965 to 134 in 1968. However, the number of mines in operation had increased to 213 in 1970.

The following tables give the average number of staff employed, number of working days, the daily wages paid and the extraction of metalliferous ore from 1965 to 1968.

TABLE No. 3.—AVERAGE NUMBER OF STAFF EMPLOYED

Year	Grand Total		Staff— Permanent — Total		Administrative		Technical		Clerical	
	MF	M	MF	M	MF	M	MF	M	MF	M
1	2	3	4	5	6	7	8	9	10	11
1965 ..	15,863	10,375	5,620	3,986	100	100	175	175	280	279
1966	14,219	9,268	4,610	3,136	97	97	153	153	289	288
1967	11,864	7,709	4,833	3,270	87	87	287	287	272	271
1968	8,241	5,519	3,296	2,410	46	46	266	266	184	183

Year	Supervisors and foremen		Other Classes		Workers :—Wage earners				
					MF	M		F	
	MF	M	MF	M		Above 18 years	Below 18 years	Above 18 years	Below 18 years
1	12	13	14	15	16	17	18	19	20
1965	625	625	1,278	1,236	3,162	1,287	284	1,401	190
1966	539	539	1,118	1,089	2,414	669	301	1,200	244
1967	470	470	1,081	1,054	2,636	892	209	1,348	187
1968	345	345	839	828	1,616	742	..	874	..

Year	Staff— Total		Administrative		Technical		Clerical	
	MF	M	MF	M	MF	M	MF	M
1	21	22	23	24	25	26	27	28
1965	10,243	6,589	5	5	13	13	20	20
1966	9,609	6,132	2	2	16	16	15	15
1967	7,031	4,439	1	1	..	..	1	1
1968	4,945	3,109	5	5	1	1	2	2

TABLE No. 3—contd.

Temporary

	Supervisors and Foremen		Other Classes		Workers :—Wage Earners				
					MF	M		F	
	MF	M	MF	M		Above 18 years	Below 18 years	Above 18 years	Below 18 years
1	29	30	31	32	33	34	35	36	37
1965	37	37	169	116	9,999	6,190	208	3,453	148
1966	25	25	205	136	9,346	5,933	5	3,405	3
1967	15	15	157	91	6,857	4,326	5	2,520	6
1968	14	14	52	39	4,871	3,046	2	1,822	1

TABLE No. 4.—Number of Working Days

Year	Grand Total		Staff Total		Administrative		Technical		Clerical	
			MF	M	MF	M	MF	M	MF	M
1	2	3	4	5	6	7	8	9	10	11
1965	38,06,480	23,10,368	9,30,959	4,62,360	n	n	n	n	n	n
1966	34,06,706	20,08,323	7,03,334	2,81,099	n	n	n	n	n	n
1967	25,28,614	14,30,825	7,69,046	3,21,851	n	n	n	n	n	n
1968	19,00,965	11,11,867	4,80,765	2,21,018	n	n	n	n	n	n

Permanent

Year	Supervisors and foremen		Other Classes		Workers—Wage Earners				
					MF	M		F	
	MF	M	MF	M		Above 18 years	Below 18 years	Above 18 years	Below 18 years
1	12	13	14	15	16	17	18	19	20
1965	n	n	n	n	9,30,959	3,79,971	82,389	4,12,879	55,720
1966	n	n	n	n	7,03,334	1,95,083	86,016	3,52,390	69,845
1967	n	n	n	n	7,69,046	2,62,036	59,815	3,93,380	53,815
1968	n	n	n	n	4,80,765	2,21,018	..	2,59,747	..

Staff—

Year	Total		Administrative		Technical		Clerical	
	MF	M	MF	M	MF	M	MF	M
1	21	22	23	24	25	26	27	28
1965	28,75,521	18,48,008	n	n	n	n	n	n
1966	27,03,372	17,27,224	n	n	n	n	n	n
1967	17,59,568	11,08,974	n	n	n	n	n	n
1968	14,20,200	8,90,849	n	n	n	n	n	n

n—not completed.

TABLE No. 4.—contd.

Year	Temporary: Supervisors and Foremen MF	Temporary: Supervisors and Foremen M	Temporary: Other Classes MF	Temporary: Other Classes M	Workers-Wage Earners MF	Workers-Wage Earners M Above 18 years	Workers-Wage Earners M Below 18 years	Workers-Wage Earners F Above 18 years	Workers-Wage Earners F Below 18 years
1	29	30	31	32	33	34	35	36	37
1965	n	n	n	n	28,75,521	17,85,535	62,473	9,83,163	44,500
1966	n	n	n	n	27,03,372	17,25,854	1,370	9,75,211	937
1967	n	n	n	n	17,59,568	11,07,633	1,341	6,49,351	1,243
1968	n	n	n	n	14,20,200	8,90,404	445	5,29,326	25

TABLE No. 5.—Wages and Salaries Paid in Rupees

Year	Grand Total		Staff— Total MF	Staff— Total M	Staff— Administrative MF	Staff— Administrative M
1	2	3	4	5	6	7
1965 .	1,67,19,535	1,34,51,495	78,84,712	69,54,683	7,92,627	7,92,627
1966 ..	1,55,45,089	1 22,50,400	64,36,265	56,27,129	4,88,060	4,88,060
1967 ..	1,29,73,884	99,73,559	60,97,194	52,28,311	5,10,284	5,10,284
1968 ..	1,31,30,637	1,05,81,743	67,13,102	61,64,334	3,37,902	3,37,902

Year	Permanent: Technical MF	Permanent: Technical M	Permanent: Clerical MF	Permanent: Clerical M	Permanent: Supervisors and foreman MF	Permanent: Supervisors and foreman M
	8	9	10	11	12	13
1965 .	6,16,708	6,16,708	5,06,790	5,03,412	11,86,242	11,86,242
1966	5,36,189	5,36,189	5,38,473	5,34,633	9,94,455	9,94,455
1967 .	7,68,406	7,68,406	4,93,088	4,93,088	8,14,673	8,14,673
1968 ..	16,73,134	16,73,134	4,72,969	4,71,919	8,33,209	8,33,209

Year	Staff—Permanent: Other Classes MF	Staff—Permanent: Other Classes M	Workers—Wage Earners MF	Workers—Wage Earners M Above 18 years	Workers—Wage Earners M Below 18 years	Workers—Wage Earners F Above 18 years	Workers—Wage Earners F Below 18 years
1	14	15	16	17	18	19	20
1965 ..	25,07,197	24,48,368	22,75,148	12,27,365	1,79,961	7,97,332	70,490
1966	23,08,176	22,84,767	15,70,912	5,95,603	1,94,422	6,94,059	87,828
1967 ..	16,59,536	16,54,328	18,51,207	8,52,743	1,34,789	7,96,651	67,024
1968 ..	20,54,000	20,39,190	13,41,888	8,08,980	....	5,32,908	....

TABLE No. 5.—contd.

Year		Satff—Temporary					
		Total		Administration		Technical	
		MF	M	MF	M	MF	M
1		21	22	23	24	25	26
1965	..	88,34,823	64,96,812	7,150	7,150	17,898	17,898
1966	..	91,08,824	66,23,271	4,200	4,200	17,028	17,028
1967		68,76,690	47,45,248	3,550	3,550	....	....
1968	..	64,17,535	44,17,409	10,330	10,330	300	300

Year		Staff—Temporary					
		Clerical		Supervisors and foremen		Other Classes	
		MF	M	MF	M	MF	M
1		27	28	29	30	31	32
1965	..	21,636	21,636	47,937	47,937	1,27,041	1,00,800
1966	..	14,890	14,890	34,100	34,100	1,90,197	1,43,523
1967	..	400	400	23,073	23,073	18,731	18,731
1968	..	1,075	1,075	20,105	20,105	57,927	45,864

Year		Workers—Wage Earners				
		MF	M		F	
			Above 18 years	Below 18 years	Above 18 years	Below 18 years
1		33	34	35	36	37
1965	..	86,13,521	61,73,521	1,27,870	22,22,757	89,013
1966	..	88,48,409	64,05,728	3,802	24,36,848	2,031
1967	..	68,30,936	46,94,424	5,070	21,28,391	3,051
1968	..	63,27,798	43,38,222	1,513	19,87,988	75

TABLE No. 6.—EXTRACTION OF METALLIFEROUS ORE

Year	Ore by species	Area in hectares: Of concessions	Area in hectares: Total exploited	Area in hectares: Exploited during the year	Ore Extracted: Quantity in tonnes	Ore Extracted: Approximate average of grade per cent	Ore Extracted: Ex-mine value in Rs.	Ore existing in ware houses as on 31-XII: Quantity in tonnes	Ore existing in ware houses as on 31-XII: Value in Rs.
1	2	3	4	5	6	7	8	9	10
1965	Total	36,723.3661(a)	2,193.7872	107.7290	60,50,537	58	6,20,68,585	21,03,701	2,67,55,423
	Iron Ore	18,153.2267	1,056.7236	43.5525	59,39,530	59	6,00,58,507	20,57,590	2,59,03,876
	Manganese Ore	330 6875	1.8851	. . .	19,363	41	6,44,009	2,462	1,96,540
	Ferro-Manganese Ore	18,239.4519	1,135.1785	64.1765	91,644	28	13,66,069	43,649	6,55,007
1966	Total	35,828.4379(a)	2,308.6451	156.0492	62,35,083	59	5,80,11,981	19,24,396	2,48,37,163
	Iron Ore	18,066.9193	1,163.5289	96,3047	61,59,321	59	5,64,15,227	19,03,453	2,42,85,365
	Manganese Ore	233.0495	1.8837	. . . .	7,325	43	4,43,607	1,331	1,98,537
	Ferro-Manganese Ore	17,528.4691	1,143.2325	59.7445	68,437	29	11,53,147	19,612	3,53,261
1967	Total	36,686.7037(a)	2,209.0534	41.5484	60,79,377	59	5,94,47,235	23,05,602	2,80,49,249
	Iron Ore	17,692.8300	1,098.7808	24.3760	60,41,627	59	5,84,06,904	22,96,574	2,77,02,798
	Manganese Ore	339.4075	1.9451	. . .	9,944	40	5,19,764	4,723	2,14,943
	Ferro-Manganese Ore	18,654.4662	1,108.3275	17.1724	27,806	29	5,20,567	4,305	1,31,508
1968	Total	33,545.0150(a)	2,069.0937	46.2165	52,82,960	60	7,61,59,353	13,75,219	1,87,77,044
	Iron Ore	17,731.9359	1,105.0752	17 6483	52,49,722	60	7,53,91,728	13,70,498	1,86,68,795
	Manganese Ore	190.0020	1.7437	. . . .	1,547	41	87,089	294	13,122
	Ferro-Manganese Ore	15,623.0771	962.2748	28.5682	31,691	28	6,80,536	4,427	95,127

(a)—1965 : Includes 21,394.7189 hectares of non operating areas.
(a)—1966 : Includes 22,032.1339 hectares of non operating areas.
(a)—1967 : Includes 24,964.4713 hectares of non operating areas.
(a)—1968 : Includes 23,193.5849 hectares of non operating areas.

A Manganese Dioxide Plant with a monthly capacity of thirty metric tonnes is located at Corlim and is working since 1970.

The mining industry is such an important industry in the district that besides earning foreign exchange, it has provided employment to a large number of workers. Of the total number of workers of 57,445 employed under livestock, forestry, fishing, hunting and plantations, orchards and allied activities, manufacturing, processing, servicing and repairs and mining and quarrying, as many as 16,237 giving a percentage of 28·27 are engaged in mining and quarrying. In the absence of any industrial development in the district in the past, it can be said that mining has helped to sustain the economy.

During the Fifth Plan a provision of Rs. 18·50 lakhs has been made for two schemes relating to (i) Field investigations including drilling and (ii) setting up of Geological and Chemical laboratory/museum. There are proposals for field investigations for preparation of feasibility reports for setting up an alumina/aluminium plant in northern part of Goa and for setting up of a fire bricks factory in Sanguem and Satari taluka.

Other large scale industries

Zuari Agro Chemicals Limited.—The Zuari Chemicals Limited was incorporated in the year 1967. It manufactures chemical fertilizers such as urea, DAP and uramphos. It is located at Sancoale. The factory has been set up at an estimated cost of over Rs. 56 crores. It is envisaged to produce 4,30,000 tonnes of saleable fertilizers per year. Besides savings in the foreign exchange to the extent of Rs. 25 crores per year, its products are expected to contribute towards an additional production of two million tons of food grain every year. The factory has set up an ammonia plant producing 660 tons per day, a urea plant producing 1,140 tons per day and a compound fertilizer plant. The details regarding these plants are as under :

Ammonia Plant (660 tonnes per day) :—Zuari Agro Chemicals Limited have adopted the most modern and economical low pressure (160 atmosphere) synthesis process for ammonia, using steam pressure for driving all centrifugal compressors.

The nitrogen required to make ammonia is drawn from the air. However, to " fix " the inert gaseous form of atmospheric nitrogen in a form easier to handle and more amenable to assimilation in the fields, the nitrogen has to be converted first to ammonia, which is gaseous at ambient temperature, and then to solid urea *prills* which are very convenient for handling storage and application. The starting point for ammonia is *naphtha*, a light fraction distilled from crude petroleum in oil refineries. The hydrogen and carbon constituting naphtha are 'reformed' with steam by high pressure catalytic process into carbon

monoxide and hydrogen, with some small quantities of methane etc. The carbon monoxide is converted to carbon dioxide by reaction with oxygen from atmospheric air, the introduction of which is regulated to also introduce the quantity of nitrogen required to produce ammonia from the hydrogen already obtained. The gas at this stage contains nitrogen, hydrogen and carbon dioxide, together with some impurities which are removed by further processing. Then the carbon dioxide is separated first by absorption in potassium carbonate solution and subsequently regenerated for use in the Urea Plant by heating this solution. The mixture of nitrogen and hydrogen in the ratio of 1 : 3 is compressed and catalytically reacted to produce ammonia. The ammonia thus produced is continuously fed to the urea plant and the compound fertiliser plant for further processing. A 3,000 tonnes Horton sphere equipped with the requisite refrigeration unit is also provided as buffer storage for liquified ammonia.

Urea Plant (1140 tonnes per day).—The Urea Plant is a single stream unit based on the well known Mitsui Toatsu 'total recycle C' process, starting with liquid ammonia and gaseous carbon dioxide from the Ammonia plant. The urea systhesis takes place under elevated pressure and temperature, with provision for recycling unreacted material for further processing. In order to ensure maximum purity and low biuret content, arrangements have been made for filtration and crystallisation. Crystals are separated in pusher type centrifuges, dried and then remelted and prilled to get urea prills of high quality.

Compound Fertiliser Plant.—The Plant has a production capacity of 53ɔ tonnes per day of Uramphos 28 : 28 : 0. Compound Fertilizer per on-stream day based on MTC-TEC process, starting with phosphoric acid (52 per cent. P_2O_5), urea and ammonia. When producing 28 : 28 : 0 about 220 tonnes per day of the urea produced in the urea plant is utilised in the Compound Fertiliser Plant which also has a built-in alternate provision to make ENPEEKAY 18 : 18 : 18 and DIAMPHOS 18 : 46 : 0.

The working capital of the company was placed around Rs. 13·58 lakhs as on December 31, 1972.

The unit provides employment to 278 technical and non-technical personnel, including 51 skilled and 21 unskilled workers and 107 office staff. The total annual wage bill came to Rs. 49·18 lakhs. Workers in the lowest category are paid at the rate of Rs. 6·60 per day and in the highest category at Rs. 10·60 per day. The principal raw materials required by the factory are naphtha, phosphoric acid and potassium chloride. All these raw materials are obtained from Indian Oil Corporation, Indian Potash Limited etc. Jute bags are obtained from manufacturers. The annual productive capacity of the factory is placed

at 2,95,000 tons in respect of urea and 1,50,000 tons in respect of complex fertilisers.

Though the direct employment potential is relatively small, the transport of finished products, manufacture of bags, repair of workshops, etc. are expected to create a number of job opportunities in and around the location of the factory.

Ciba Geigy of India Limited.—Ciba Geigy of India Limited, Santa Monica Plant, situated at Corlim, is one of the important industrial units in this district. It manufactures Dimecron 100 and Nuvan 100 EC both of which are now being widely used in agriculture for protecting plants against their destruction by insect pests. The unit also manufacturers Ciba pharmaceutical specialities which earn valuable foreign exchange through the export market. The Plant was started in 1972. It had an investment of Rs. 4,73,66,012 in land and buildings, plant and machinery, furnitures, vehicles, etc., in the year 1974. The total employment in the industry including skilled and unskilled workers was 263 and the average daily number of workers excluding office staff employed during the year was 63. They were paid about Rs. 13,64,250 per day as wages. The plant also provides employment to many more persons engaged in ancilliary industries such as the manufacture of plastic containers, corrugated cardboard sheets, wooden cases and other such packing materials. Raw materials utilised by the plant during the year 1974 is given in the following statement :—

	Major Principal Raw Materials	Unit	Quantity
A	Monocrotophos	... Kgs.	1,99,680
	Diethyl Aceto Acetamide	... „	2,00,607
	Trimethyl Phosphite	... „	32,626
	Phosphorus White	... „	64,690
	Chlorine	... „	6,16,315
	Methanol	... „	2,32,231
	Paraldehyde	.. „	37,045
	Cyclohexanone	... „	1,67,456
	Isopropyl Alcohol	... „	36,960
	Sodium Dimethyl Dithiocarbamate.	„	49,517
	Zinc Sulphate	... „	33,830
	Chloral	... „	7,783
	Major Other Raw Materials	**Unit**	**Quantity**
B.	Benzene	... Kgs.	39,927
	Trienthylamine	... „	15,534
	Triethanolamine	... „	3,475
	Monochlorobenzene	... „	21,948

The industry utilised furnace oil of about 750 kls., valued at Rs. 5,30,000. Being a multi purpose plant, production capacity of the industry varies from 600 to 1,300 tonnes depending on product mix.

The following statement indicates the quantity of principal and other products during the year 1974 :—

A. *Principal Production.*

Finished Products	Unit	Quantity
Finished Products—		
Dimecron 100	... Lts.	3,49,675
Nuvan 100 EC	... „	68,430
Nuvan 100 SC	... „	...
Nuvacron 40	... „	3,44,250
Cuman L	... „	1,05,153

B *Other Production.*

Technical Material—		
Phosphemidon	... Kgs.	3,56,380
D. D. V. P.	... „	1,20,530
Intermediates—		
Phosphorus Trichloride	... „	2,83,480
Trimethyl Phosphite	... „	2,24,562
Chloral	... „	89,501

Sanjivani Sahakari Sakhar Karkhana Limited.— The sugar factory *viz.* Sanjivani Sahakari Sakhar Karkhana Limited, is a growing industry in the district. The unit was established in 1971 and started its trial crushing season on the 3rd February 1974. It is organised on co-operative lines and is situated at Piliem in the Sanguem taluka. The factory area is known as Dayanand Nagar. During the trial season the unit utilised 12,440 matric tonnes of sugarcane which is the main raw material. The unit produced 5,165 quintals of sugar during the trial season amounting to the value of Rs. 10,81,000. The annual crushing capacity of the factory is 1,250 tonnes of sugarcane per day for the full season of 180 days. The total employment in the factory is 428 of which 251 are skilled and 177 are unskilled workers, while the everage daily number of office staff employed during a year is 21. The amount of annual wages spent on the workers is to the tune of Rs. 7,33,440 while on the office staff the amount is Rs. 84,660. The unit has a fixed capital of Rs. 2,52,52,000 and is composed of land and buildings Rs. 45,32,000, plant and machinery Rs. 1,97,42,000, furniture, fixtures and fittings, vehicles etc. Rs. 9,78,000. The Government have contributed Rs. 75,00,000 in the form of share

capital besides shouldering 100 per cent. guarantee for repayment of Industrial Finance Corporation loan of Rs. 1,50,00,000. So far the unit has spent Rs. 7,45,000 on the welfare activities such as staff quarters, canteen, roads, sanitary blocks, etc.

Pelletisation Plant.—The Pelletisation Plant owned by Messrs. Chowgule and Company Private Limited, with an annual production capacity of half a million tons, was established at Usgao and is working since 1970. The pellets produced in the plant are mainly exported to Japan. The capital investment of the plant is to the tune of Rs. 2·75 crores. It provides employment potential for 70 persons. The main raw materials required by the plant are lime stone, which is supplied by Goa Mines, and a large quantity of water, electricity and furnace oil. It is one of the main industrial units in the district and its importance lies in the fact that it earns much required foreign exchange for the country and has become an export oriented industry. It is also an industry with the highest capital investment in the entire territory of Goa, Daman and Diu.

Chowgule Textile Mill.—The Chowgule Textile Mill was established at Xeldem and has a capital investment of about Rs. 2 crores and employment potential for 350 persons. The main raw material required by the Mill is cotton which is chiefly obtained from Bombay and Bijapur.

Pilsner Breweries.—The Pilsner Breweries was established at Arlem. With a capital investment of about Rs. 1·3 crores, it has an employment potential for 60 workers.

The main raw materials required by the unit are malt, rice, hops, coal and lubricants both indigenous and imported. It manufactures beer which is mainly marketed at Bombay, Goa, Hyderabad, Trichur, Kerala, Pondicherry, Madras, Bangalore, Calcutta and Karnataka.

Goa Flour Mills.—The Goa Flour Mills was established at Chicalim with a capital investment of about Rs. 20,00,000. It has an employment potential for 154 persons. The main raw material required by the flour mills is wheat which is generally imported. It is engaged in the manufacture of wheat flour and other allied products.

Goa Steel Rolling Mills.—The Goa Steel Rolling Mills was established at Bicholim with an employment potential for 60 persons. The main raw materials required by the concern are billets and scraps which are mainly obtained from Bombay besides from the local markets. The unit manufactures round and square bars which are mainly marketed at Ratnagiri, Belgaum and Karwar besides at the local markets.

Curti Chemicals.—The Curti Chemicals was established at Ponda. With a capital investment of about Rs. 25,00,000, the unit has an employment potential for 115 persons. The main raw materials

required by the unit are manganese dioxide and potassium hydroxide which are mainly obtained from Bombay. The Curti Chemicals undertakes the manufacture of potassium permanganate which, besides being marketed at Bombay and Goa, is also exported to other countries. The concern earns invaluable foreign exchange required by the country.

Associated Breweries and Distilleries.—The Associated Breweries and Distilleries' Unit operates at Cortalim. It has a capital investment of about Rs. 12·50 lakhs and has an employment potential of 36 persons. The main raw materials required by the unit are malt and pepsin which are indigenous products, and yeast and trust food hops which are mainly imported from abroad. The unit undertakes the manufacture of beer and cashew brandy which is mostly consumed in local markets.

Small scale industries

Besides the large scale industies described above, there are in the district, 816 small scale industrial units registered as on March 31, 1972. The Directory of Small Scale Industries published by the Industries Department, Government of Goa, Daman and Diu, as on 31st March 1972, also mentions that some small units might not have found a place in the Directory as they had not applied for registration. Thus it is evident that there must be a large number of units than those mentioned in the Directory that are working in the district. It may also be mentioned here that of the small industrial units, 42 flour mills, 94 bakeries and 46 shops manufacturing and selling aerated waters and cold drinks, which do not come under the purview of this chapter, have been treated separately in the chapter on Miscellaneous Occupations. Of these units excepting the three exceptions mentioned earlier, around 40 were established prior to Liberation of the territory and the remaining were established after Liberation. Thus more than 80 per cent of the small industrial units have been established after Liberation. This clearly brings out the apathy shown by the then Portuguese rulers to the industrial development of the district.

Cashewnut Processing.—An on March 31, 1972, there were in the district, 8 cashewnut processing units. Of these, 3 were established prior to Liberation in 1932, 1933 and 1955 and the remaining 5 were established after Liberation. These units are functioning at Sanquelim, Bicholim, Candola, Ponda, Savoi-Verem, Ona, Satari and Panaji. Two of these units were engaged in the processing of cashew nuts, while the third also extracts cashew oil. The remaining were engaged in extracting cashew kernels and one of them, in extracting oil from the shells. The installed monthly capacity of these units individually was 50 tons of 11 kg. each, 40,000 kg., 20,000 kg., 40 tons, 1,200 tins of 11.34 kg., 50 tons and 34 tons respectively. The maximum fixed capital

investment in the unit was to the tune of Rs. 4,00,000·00 while the minimum stood at Rs. 9,000·00. The average fixed capital of a cashew-nut processing unit came to about Rs. 1,42,600·00. The highest working caital required by a unit was Rs. 6,00,000·00 while the lowest was Rs. 10,000·00. The average investment by way of working capital came to Rs. 2,60,000·00.

Information about the average daily employment provided by these units was available in respect of 6 units. The highest number of persons employed in a single unit was 250 while the lowest was 20. The average daily employment provided by these units came to 130. The following table gives information about roasting and packing of cashewnuts from 1965 to 1969 with talukawise details for 1969 only.

TABLE No. 7.—ROASTING AND PACKING OF CASHEWNUTS FROM 1965 TO 1969.

Year/ Taluka	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Cashewnuts under roasting		Total	
				Kg.	Rs.	Kg.	Rs.
1	2	3	4	5	6	7	8
1965 .	9	6	726	20,20,326	19,27,297	4,95,857	25,97,172
1966 .	9	6	220	20,27,173	13,88,980	3,57,830	27,47,540
1967 .	9	5	624	22,95,034	29,20,561	5,41,090	40,94,203
1968 .	5	4	418	20,27,790	30,53,750	4,76,900	37,22,649
1969 .	5	4	464	20,03,980	29,17,390	4,68,895	36,98,990
1969 :							
Tiswadi ..	1	1	129	1,06,220	1,06,200	25,545	1,47,255
Ponda ..	1	1	71	4,53,200	6,79,210	1,03,725	7,65,950
Bicholim .	3	2	264	14,46,580	21,31,980	3,39,625	27,85,785

Years/ Taluka	Roasting of cashewnuts prepared: First Grade		Second and Third grade		Sundry		Quantity and value of existing stock in the warehouse as on 31-XII	
	Kg	Rs.	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	9	10	11	12	13	14	15	16
1965	4,30,848	23,58,947	55,958	2,14,249	9,041	23,976	1,02,180	5,90,944
1966 ..	2,98,750	23,27,250	37,330	1,86,650	21,750	2,33,640	12,740	94,235
1967 .	4,63,653	36,52,561	67,065	3,72,330	10,372	69,312	1,49,536	10,65,284
1968 ..	4,07,234	34,06,913	52,866	3,03,196	16,800	12,540	1,06,432	7,74,770
1969 ..	3,99,507	32,94,907	69,388	4,04,083	....	....	410	2,530
1969 :								
Tiswadi	20,370	1,27,100	5,175	20,155	....	....	410	2,530
Ponda ..	70,722	5,67,932	33,003	1,98,018	....	....	....	....
Bicholim ..	3,08,415	25,99,875	31,210	1,85,910	. .	....	...	....

Canning Industry.—In the district there are 9 units undertaking canning of fish, meat, fruit, juices, prawns and shrimps, etc. All the units were establishbed after 1961. These units were located at Margao, Mormugao, Panaji, Curtorim and Corlim Industrial Estate. The installed individual monthly capacity of four units was five tons

in respect of two units, 5,400 tons and 15 tons in respect of two other units and in respect of two more units it was to the extent of Rs. 75,000·00 and Rs. 30,000·00.

The aggregate investment by way of fixed capital of all these units was to the tune of about Rs. 20.09,000·00 giving an average of about Rs. 2.23,000·00. The maximum amount invested by a single unit towards fixed capital was Rs. 5,28,000·00 and the minimum was Rs. 34,300·00. Of these, eight units (for which figures of working capital are available) had working capital of about Rs. 6,90,400·00 giving an average of Rs. 86,300·00. The maximum working capital requirements of a single unit were placed at Rs. 3,00,000·00 while the minimum was placed at Rs. 10,000·00.

Eight of these units provided employment to 294 persons giving an average of 37 persons per unit, the maximum number of persons employed in a single being 108 and the minimum being 5.

The following table gives in details, statistics regarding raw materials, output, quantity and value of existing product, number of establishments and number of workers, etc. in respect of canning and preservation of meat, fish and fruits from 1965 to 1969.

TABLE No. 8.—CANNING AND PRESERVING OF MEAT, FISH AND FRUITS

Year	Establishment existing as on 31-XII	Establishment in operation as on 31-XII	Workers employed as on 31-XII	Raw Meat	
				Meat	Value
				Kg.	Rs.
1	2	3	4	5	6
1965 ..	3	3	1,136	4,349	14,840
1966	3	3	1,950	2,473	7,279
1967	3	3	681	5,968	25,639
1968 ..	3	3	985	3,673	15,489
1969 ..	4	4	491	14,716	49,864

Year	Materials					
			Fish			
	Condiments	Value	Fish	Value	Condiments	Value
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	7	8	9	10	11	12
1965 ..	2,513	16,714	70,484	81,555	10,796	38,235
1966 ..	1,054	7,896	70,662	93,107	23,540	86,258
1967 ..	1,325	4,625	1,80,454	1,91,929	27,164	77,090
1968 ..	576	4,674	3,29,328	2,12,106	63,775	1,56,911
1969 ..	884	8,423	9,03,466	5,53,810	90,716	4,81,745

TABLE No. 8.—contd.

Year	Raw Materials — Fruits: Sugar	Value	Fruits	Value	Others	Value
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	13	14	15	16	17	18
1965 ..	17,096	21,412	67,938	44,521	3,080	6,550
1966 ..	31,709	40,532	1,18,583	74,235	10,553	12,025
1967 ..	41,273	58,373	1,82,746	1,28,841	2,367	9,761
1968 ..	23,106	79,376	1,28,741	95,380	2,160	4,255
1969 ..	94,158	1,35,145	1,59,359	1,61,771	4,594	4,384

Year	Output — Meat: Total		Canned	Value	Output — Fish: Fish	Value	Other seafoods	Value
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	19	20	21	22	23	24	25	26
1965 ..	1,86,218	4,70,405	8,262	39,611	82,860	2,19,422	.	..
1966 ..	2,30,358	9,19,747	13,402	50,213	99,559	4,68,577	525	1,975
1967 ..	3,83,591	13,88,629	7,350	39,494	1,66,795	7,35,490	..	..
1968	3,63,708	15,00,901	4,569	39,956	2,39,996	10,46,677	..	..
1969 ,	8,34,043	31,01,936	9,192	72,487	6,04,234	22,79,469	..	..

Year	Output — Fruits: Jams	Value	Stewed	Value	Others	Value
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	27	28	39	30	31	32
1965 ..	791	791	4,125	6,609	90,180	2,03,972
1966 ..	38,116	1,80,080	2,482	2,482	76,274	2,16,412
1967 ..	69,716	2,34,900	....	....	1,39,730	3,93,652
1968 ..	38,785	1,80,427	....	....	80,358	2,33,841
1969 ..	60,938	2,91,483	....	....	1,59,679	4,58,497

Year	Quantity and value of existing product: Meat	Value	Fish	Value	Fruits	Value
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
	33	34	35	36	37	38
1965 ..	4,819	18,116	36,985	2,08,512	1,58,382	3,09,489
1966 ..	13,621	45,830	67,905	3,40,553	1,76,946	47,753
1967 ..	8,020	50,120	96,246	2,17,896	4,07,213	10,45,468
1968 ..	1,422	16,680	1,39,189	6,33,055	49,977	1,71,668
1969 ..	11,088	57,572	3,53,931	14,74,190	1,88,850	6,17,499

Breweries and Distilleries.—The district being under the Portuguese rule for a very long time and it being a place of tourist interest, it is considered as a place of enjoyment where no sort of prohibition was ever introduced. Many people of late have adopted, at least partially, a western way of living, and the consumption of liquor in the district is on a wide scale. In the district there are 13 breweries and distilleries located at Panaji, Chandor, Verna, Margao, Molem, Ambora, Cumbarjua, Duler and Verem. However, it is a significant point that all these units have been established after Liberation. All the demand for quality liquors was met from imports in former days. These units undertake the manufacture of beer, whisky, brandy, port wine, etc. and various kinds of liquors. One of the units was engaged in the bottling of country liquors.

The production capacity was expressed by these units in different ways. Seven of these units expressed the production capacity in terms of bottled liquor produced and the monthly individual installed capacity in respect of these seven units was 1,500 bottles in respect of one unit ; 3,000 bottles each in respect of two units ; and 6,000, 8,000 15,000 and 12,500 bottles in respect of other units. One unit gave the installed monthly capacity as 3,000 cases while in respect of two other units it was 24,000 litres and 27,000 litres respectively.

The total fixed capital investment of all these units came to about Rs. 4,95,000·00 giving a per unit average of Rs. 38,100·00, the maximum amount invested in fixed capital by a single unit being Rs. 2,50,000·00 and the minimum being Rs. 1,505·00. The aggregate working capital invested by all these units amounted to Rs. 4,11,000·00 giving an average of Rs. 31,600·00 per unit, the maximum by a single unit being Rs. 1,00,000·00 and the minimum being Rs. 2,000·00. All these units provided employment to 92 persons, giving an average of 7 persons per unit. The maximum number of persons employed by a single unit stood at 19 while the minimum stood at 2.

Chemical Industry.—As on March 31, 1972, there were in the district 27 units classified under chemical industry and manufacturing soap, candles, thinner, French Polish, cosmetics, plastic emulsion paints, chalk sticks, sodium silicate, lime from sea shells, dyes, colours, etc. These units were located at Bicholim, Margao, Raia, Moira, Mapusa, Davorlim, Paroda, Bordem, Panaji, Calapur, Benaulim, Malbhat, Loutolim, Sanquelim, Ponda, Nerul, Navelim and Khareband (Margao). Of the 27 units, 9 were engaged in the manufacture of soap including washing soap, toilet soap, etc. The total fixed capital investment in all of the units manufacturing soap was Rs. 4,78,400·00 giving per unit average of Rs. 53,200·00. The maximum amount invested by way of fixed capital by a single unit was Rs. 3,65,000·00

and the minimum was Rs. 2,000·00. The total working capital requirements of six of these units were placed at Rs. 4,69,000·00 giving an average of Rs. 78,200·00 per unit, the maximum and minimum capital being Rs. 3,00,000·00 and Rs. 1,000·00 respectively. Eight of these units provided employment to 62 persons giving a per unit average of 8 persons, the maximum employed by a single unit being 18 and the minimum being 1.

The following table gives information about the number of units engaged in the manufacture of washing soap, its production and value from 1965 to 1969 with a taluka-wise break-up for 1969 only:

TABLE No. 9.—NUMBER OF UNITS ENGAGED IN THE MANUFACTURE OF WASHING SOAP, ITS PRODUCTION AND VALUE, ETC.

Year/Taluka	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Production of soap for washing clothes (lower grade)	Value of production	Quantity and value of existing stock in the warehouse as on 31-XII	
				Kgs.	Rs.	Kgs.	Rs.
1965 ..	11	8	54	6,56,813	8,68,696	96,845	1,17,201
1966. ..	10	8	53	12,35,792	17,45,179	1,29,589	1,41,961
1967.. ..	9	8	60	12,50,068	15,30,209	42,309	65,936
1968.. ..	7	6	41	7,05,480	11,05,585	37,812	2,63,554
1969.. ..	7	5	55	8,42,160	12,74,552	15,803	29,686
1969 :							
Tiswadi ..	1	1	13	99,610	2,49,024	5,852	14,631
Salcete ..	2	1	3	16,135	24,203	600	900
Bardez ..	3	2	23	5,16,505	7,25,521	9,351	14,155
Bicholim ..	1	1	16	2,09,910	2,75,804	..	..

Of the remaining units 7 were engaged in the manufacture of candles. The total fixed capital of six of these units came to Rs. 3,74,300·00 giving an average of Rs. 62,400·00 per unit, the maximum by a single unit being Rs. 2,04,360·00 and the minimum being Rs. 9,000·00. The total investment of six of these units in working capital came to Rs. 81,500·00 giving per unit average of Rs. 13,600·00 the maximum by a single unit being Rs. 35,000·00 and the minimum being Rs. 500·00. These units provided employment to 43 workers giving an average of 7 workers per unit. Of these units one undertook the manufacture of distilled water, ink and candles and the others undertook the manufacture of chalk sticks.

Excluding those units engaged in the manufacture of soap and candles, which were about 59 per cent. of the units engaged in chemical

industries, the remaining 41 per cent. of the units numbering eleven were engaged in the manufacture of other chemical products such as thinners, candles, French polish, cosmetics, chalksticks, writing ink, *agarbattis*, lime from sea shells, paints, dyes, varnish, colours, etc.

The total fixed capital investment of ten of these units came to Rs. 14,24,000·00 giving an average of Rs. 1,42,400.00 per unit, the maximum by a single unit being Rs. 10,40,000·00 by a unit engaged in the production of cosmetic material and the minimum being Rs. 100·00 by a unit engaged in the manufacture of French polish. The total investment by way of working capital of eight of these units came to Rs. 3,63,500·00 giving per unit average of Rs. 45,500·00 the highest being Rs. 2,00,000·00 in case of a unit engaged in the manufacture of plastic emulsion paints and the minimum being Rs. 1,500·00 in the unit manufacturing ink. Ten of these units provided employment to 53 persons giving per unit average of 5.

Carbonic Gas.—In the district, there was only one unit engaged in the manufacture of carbonic gas. It provided employment to seven workers as on December 31, 1969. The average daily output of the unit was 198 kgs. The following table gives statistics regarding the industry from 1965 to 1969 :—

TABLE No. 10.—CARBONIC GAS

Year	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Avegare daily out-put	Raw Material								Out-put		Quantity and value of stock existing in warehouse as on 31-XII	
					Potassium Carbonate		Coke		Calcium Chloride		Frecon' Gas					
					Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1965 ..	1	1	7	180	1,800	5,128	33,850	6,361	2,960	4,286	19	688	56,988	1,10,232	4,365	9,215
1966 ..	1	1	7	180	1,947	10,041	76,850	13,943	5,300	5,410	13	236	67,378	1,52,172	5,220	n.a.
1967 ..	1	1	7	180	1,312	6,610	93,957	19,735	4,720	4,273	12	266	61,443	1,63,016	6,543	15,703
1968 .	1	1	7	198	1,930	13,370	1,18,000	33,040	6,169	3,169	20	220	55,400	1,43,278	3,114	8,408
1969 ..	1	1	7	198	2,040	6,504	1,19,690	25,583	3,818	3 749	14	149	58,927	1,58,831	5,625	9,563

Oxygen Gas.—As on December 31, 1969, there was in the district, one unit engaged in the manufacture of oxygen gas which provided employment to about 6 workers. The average daily output of the unit was 60 cubic metres. The following table gives statistics regarding this industry from 1965 to 1969 :

TABLE No. 11.—OXYGEN GAS

Year	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Average daily output in Cu. M.	Phosphorus		Caustic Potash		Caustic Soda	
					Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1	2	3	4	5	6	7	8	9	10	11
1965 ..	2	1	6	60	..	..	3,300	5,790	2,000	5,750
1966 ..	2	1	6	54	..	..	2,212	3,088	202	327
1967 ..	1	1	6	54	..	..	..	..	3,107	4,953
1968 ..	1	1	6	60	..	..	3,060	4,864		..
1969 ..	1	1	6	60	..	..	..	..	2,708	4,360

Year	Ammonia liquid		Distilled Water		Others		Output		Quantity and value of existing stock in warehouse as on 31-XII	
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Cu. M.	Rs.	Cu. M.	Rs.
	12	13	14	15	16	17	18	19	20	21
1965 ..	75	12	110	165	..	.	39,148	1,26,214	..	....
1966 ..	275	46	30	47	.	.	16,477	58,062	4,598	16,095
1967 ..	295	52	35	53	..	..	20,203	76,380	....	..
1968 ..	3	56	32	48	.	..	34,168	1,11,043	510	1,658
1969 ..	3	56	32	48	..	..	31,897	1,03,663	569	1,848

Hydric Ice.—As on December 31, 1969, there were in the district, 8 units engaged in the manufacture of hydric ice. Of these, two each were located in the talukas of Tiswadi and Salcete, one was located in the taluka of Mormugao. These units provided employment to 26 workers. The average daily output of these units was 14 tons, the yearly production being 1,093 tons valued at Rs. 1,01,530·00. Of the production of 1,093 tons during the year 1969, 229 tons were supplied to ships, 71 tons were utilised for preserving fish and 793

tons were utilised for other purposes. The following table gives statistical information regarding these units from 1965 to 1969 :

TABLE No. 12.—HYDRIC ICE

Year	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Average daily output	Production		Ship Supplies	For preserving fish	Utilised for other purposes
					Total				
		No		Tons		Rs.		Tons	
1	2	3	4	5	6	7	8	9	10
1965 .	8	8	3	18	672	77,760	489	2	481
1966	8	7	29	21	707	56,560	....	3	704
1967	8	7	57	14	1,076	86,080	20	35	1,021
1968 ..	7	6	21	12	1,115	89 200	167	. .	978
1069 .	8	5	26	14	1,093	1,01,530	229	71	793
1969 :									
Tiswadi	2	1	4	1	247	19,760	....	..	247
Salcete ..	2	..	. .	.	..	..	. ..	.	..
Bardes ..	1	1	5	3	55	5,500	.	. .	55
Mormugao	3	3	17	8	791	76,270	229	71	491

Plastic Industry.—As on March 31, 1972, there were in the district, 17 units engaged in the manufacture of plastic articles such as pens, ball pens, spectacle frames, nylon buttons, optical lenses, acrylic sheets, polythene bags, sheets, tubings, etc., table tennis balls, plastic toys, scientific lenses and other plastic utility goods. The total fixed capital investment of 17 of these units came to about Rs. 7,12,600·00 giving an average of about Rs. 41,900·00 per unit, the maximum by a single unit being Rs. 2,51,000·00 and the minimum being Rs. 6,600·00. The working capital requirements of 16 units came to Rs. 8,32,000·00. This gives a per unit average working capital of Rs. 52,000·00. The highest amount utilised in a year by a single unit towards working capital was Rs. 2,65,000·00, while the lowest was Rs. 9,000·00. These 16 units provided employment to 194 persons with an average of 12 workers per unit, the highest number of persons employed by a single unit being 45 and the lowest being two.

Insecticides and Pesticides.—There is only one small scale industrial unit engaged in the manufacture of insecticides and pesticides. It is located at Mormugao and is known as Goa Pesticides Private Limited. It provides employment to about 33 workers daily. It has invested Rs. 2,66,000·00 by way of fixed capital. The working capital requirement of the unit came to Rs. 1,00,000·00.

Electronic Industry.—There is only one small scale unit engaged in the manufacture of transistors, radios and transformers. It has an installed monthly capacity to manufacture 250 transistors and 100

Valve radios. It provides employment to four persons daily. The unit has invested Rs. 4,750·00 by way of fixed capital and Rs. 15,000·00 by way of working capital.

Paper Conversion Industry.—In the district; there are three units that are engaged in paper conversion, manufacturing paper straws, packing cases, paper boxes, corrugated paper sheets and boxes. The fixed capital investment of these units was Rs. 8,916·00, Rs. 11,870·00 and Rs. 84,800·00. The working capital requirements in respect of two units were Rs. 10,000·00 and Rs. 7,500·00. These units provide employment to six, four and five persons respectively.

Non-Ferrous Metals.—Of the five industrial units engaged in the manufacture of non-ferrous metals, three at Bicholin were engaged in the manufacture of brass articles and utensils. One of them also undertook the manufacture of copper articles. The fourth unit at Corlim, Mapusa, undertook the manufacture of copper utensils while the fifth at Corlim, Mapusa, was engaged in the manufacture of non-ferrous metals. The unit engaged in the manufacture of non-ferrous metals at Corlim, Mapusa, had a monthly installed capacity to produce non-ferrous metals valued at Rs. 7,000·00. The one manufacturing brass utensils and located at Bicholim had a monthly installed capacity of five tons while the other at Bicholim had a monthly capacity of 40 tons and the third one at Bicholim had a monthly capacity to produce brass and copper articles valued at Rs. 4,500·00. The fixed capital investment of all these units totalled Rs. 92,630·00 giving a per unit average of Rs. 18,526·00, the maximum amount engaged in fixed capital being Rs. 50,000·00 and the minimum being Rs. 1,000·00. The total investment in working capital of four of these units came to Rs. 29,000·00 giving an average of Rs. 7,250·00 per unit, the maximum being Rs. 10,000·00 and the minimum being Rs. 2,000·00.

It may be noted here that three of the five units engaged in the manufacture of non-ferrous metals were established during the early '30s.

Textiles.—As at the end of March 1972, there were in the district two units engaged in the manufacture of textiles. One of them was engaged in the manufacture of handloom fabrics and the other was engaged in the manufacture of nylon and silk products. The capacity of the unit engaged in the manufacture of handloom fabrics was 72 pieces per day, while the same in respect of the unit engaged in the manufacture of nylon and silk products was 600 metres per month. The handloom unit was located at Savoi Verem while the other engaged in nylon and silk products was located at Corlim, Tiswadi. The total investment by way of fixed capital of both these units was Rs. 1,33,084·00, of which the unit engaged in the manufacture of

nylon and silk products accounted for Rs. 1,28,504·00. The amount utilised as working capital was Rs. 3,000·00 in respect of the unit engaged in the manufacture of handloom products and Rs. 50,000·00 in respect of the unit engaged in the manufacture of nylon and silk products. Both these units provided employment to thirteen persons daily of whom seven were employed by the unit engaged in the manufacture of nylon and silk products.

Pharmaceuticals.—The district had six units engaged in the manufacture of pharmaceuticals such as adhesive plasters, pharmaceutical tablets, sanitary towels, syrups, ointments, capsules, etc., by the end of March 1972. These units were located at Panaji, Cortalim, Assolna, Mapusa and Margao.

The total investment by way of fixed capital of five of these units put together amounted to Rs. 9,85,036·00 giving a per unit average of Rs. 1,97,007·00, the maximum investment of fixed capital of a single unit being Rs. 3,90,000·00 and the minimum being Rs 500·00. The total investment in working capital of these units came to Rs. 6,03,000·00 giving an average of Rs. 1,20,600·00 per unit, the maximum invested by a single unit in working capital being Rs. 3,00,000·00 and the minimum being Rs. 2,000·00. Five of these units provided employment to 105 persons giving an average of 21 persons per unit, the maximum number employed by a single unit being forty and the minimum being one.

Storage Batteries.—By the end of March 1972, there were in the district ten units engaged in the manufacture and repair of storage batteries, battery charging, vulcanising, etc. One unit undertook the manufacture of distilled water bottles besides battery charging. These units were located at Panaji, Margao, Curchorem, Borim and Vasco-da-Gama. One of the units was established in the year 1952. The total fixed capital investment of nine of these units came to about Rs. 61,598·00 giving a per unit average of Rs. 6,844·00, the maximum investment by way of fixed capital by a single unit being Rs. 14,500·00 and the minimum being Rs. 1,000·00. The total investment in working capital of eight of these units amounted to Rs. 1,22,130·00 giving an average of Rs. 15,270·00 per unit, the maximum amount by way of working capital of a single unit being Rs. 90,000·00 and the minimum being Rs. 930·00. Nine of these units provided employment to about 41 persons daily giving an average of five persons per unit, the maximum number of persons employed by a single unit being 15 and the minimum being 1.

Rubber and Rubber Products.—There were in the district, 15 units engaged in the manufacture of rubber products by the end of March 1972. These units were mainly engaged in the manufacture of rubber

stamps, retreading and remoulding of tyres, manufacture of rubber spare parts for automobiles, etc. They were located at Curti, Borda, Ponda, Curchorem, Sanquelim, Calapur, Ribandar, Navelim, Cacora, Fatorda, Verna and Quepem.

The total fixed capital investment of all these units came to about Rs. 7,98,600·00 giving a per unit average of Rs. 53,240·00, the maximum amount invested by a single unit being Rs. 4,29,322·00 and the minimum being Rs. 2,500·00. These units had invested an amount of Rs. 2,15,300·00 towards working capital. The average working capital invested by a single unit towards working capital was Rs. 87,611·00 while the minimum was Rs. 2,000·00. All these units provided employment to over a hundred persons in aggregate giving an average of seven persons per unit with a maximum number of persons employed by a single unit standing at 34 and the minimum at two.

The following table gives statistical information regarding industrial units engaged in tyre retreading and remoulding from 1965 to 1969 with talukawise details for 1969. (Table 13 on p. 354).

Clay and Ceramic Products.—There were in the district as on March 31, 1972, 14 units engaged in the manufacture of clay and ceramic products. These included three units established prior to Liberation. One of them was established as early as 1922 while the two others were established in 1955 and 1956. All these units were engaged in the manufacture of bricks, mosaic and cement tiles, marble and plain tiles, cement flooring tiles, roofing tiles, cement bricks, clay bricks, grills and clay blocks, etc. The total fixed capital investment of all these units put together came to Rs. 9,31,500·00 giving an average of Rs. 66,500·00 per unit, the maximum by a single unit being Rs. 2,33,691·00 and the minimum being Rs. 100·00. The investment by way of working capital of 13 of these units came to about Rs. 2,69,500·00 giving a per unit average of Rs. 20,730·00, the maximum by a single unit being Rs. 60,000·00 and the minimum being Rs. 1,000·00. All these units provided employment to about 315 persons giving an average of about 23 persons per unit.

The following table gives details regarding the manufacture of bricks and tiles from 1965 to 1969 with taluka-wise details for 1969. (Table 14 on p. 356).

Printing Presses and Manufacture of Stationery Articles.—By the end of March 1972, there were in the district, 51 units, some working as printing presses and some manufacturing stationery articles such as carbon papers, typewriter ribbons, exercise books, registers and undertaking binding works too. These units were located at Panaji, Margao, Mapusa, Ponda, Assonora, Curchorem, Sanvordem, Mormugao.

TABLE No. 13.—Tyre Retreading and Remoulding

Year/Taluka	Estabishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Average capacity of daily work	Raw Material					
					Carbon Black		Rubber including tyre soles		Rubber Paste	
					Kg.	Rs.	Litres	Rs.	Litre	Litre
1	2	3	4	5	6	7	8	9	10	11
1965 ..	7	7	55	83	....	....	99,643	5,35,758	4,669	19,067
1966 ..	7	6	55	77	....	....	61,997	4,91,610	1,837	6,470
1967 ..	8	6	60	83	....	....	70,508	5,90,129	2,889	24,440
1968 ..	8	6	64	80	....	....	76,493	6,38,144	....	22,521
1969 ..	7	7	66	87	1,125	575	72,585	6,54,487	....	27,292
1969 :										
Salcete ..	2	2	10	11	....	....	5,516	50,060	....	1,868
Bardez ..	1	1	5	13	....	....	2,239	20,003	....	915
Ponda ..	1	1	40	51	....	....	54,220	4,87,268	....	8,740
Quepem ..		[illegible]	11	12	1,125	575	10,610	97,126	....	15,769

Solvent		Others		Tyre retreaded		Tyre repaired		Tubes repaired	
No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
12	13	14	15	16	17	18	19	20	21
5,025	9,912	137	736	7,799	10,56,896	303	26,275	427	2,343
4,365	8,461	....	....	7,649	10,30,009	54	1,318	329	1,218
4,368	8,581	....	60,817	7,753	11,48,540	937	1,14,464	22	124
5,173	7,226	....	53,253	7,324	13,43,573	396	55,405	57	310
5,430	8,513	....	52,255	7,288	13,56,257	56	1,306	140	726
930	701	....	1,443	875	82,920	....	....	....	....
120	400	....	16,000	263	32,337	....	....	....	....
2,940	2,652	....	27,172	5,091	10,70,530	56	1,306	140	726
1,440	4,760	....	7,640	1,059	1,70,470	....	....	....	....

TABLE No. 14.—MANUFACTURE OF BRICKS AND TILES

(Value in Rs. and No. of pieces in '000)

Year/ Taluka.	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII		Production							
					Total		Tiles		Large Tiles		Bricks	
			Males	Females	No. of pieces	Value in Rs.	No. of pieces	Value in Rs.	No. of Pieces	Value in Rs.	No. of pieces	Value in Rs.
1	2	3	4	5	6	7	8	9	10	11	12	13
1965 ..	6	5	128	296	1,238	285	759	136	190	125	289	21
1966 ..	6	3	52	32	1,465	479	1,091	242	373	236	..	..
1967 ..	6	3	68	59	1,672	544	1,616	514	53	29	..	..
1968 ..	2	2	40	65	1,633	40.549	1,532	37,486	39	2,907	60	100
1969 ..	4	4	47*	68*	1,743	584	53	5	1,312	375	113	14
1969– Bardez ..	2	2	12*	4*	264	170	21	2	15	12	..	..
Ponda ..	1	1	6*	18*	145	17	32	3	..	..	113	14
Quepem ..	1	1	29*	46*	1,334	397	..	..	1,297	363	..	..

Year/ Taluka.	Quantity existing in warehouse as on 31-XII											
	Others		Total		Tiles		Large Tiles		Bricks		Others	
	No. of pieces	Value in Rs.	No. of pieces	Value in Rs.	No. of pieces	Value in Rs.	No. of pieces	Value in Rs.	No. of piec s	Value in Rs.	No. of pieces	Value in Rs.
1	14	15	16	17	18	19	20	21	22	23	24	25
1965 ..	†	..	63	134	519	101	40	26	72	7	..	..
1966 ..	1	1	562	128	553	122	9	6	..	..	†	†
1967 ..	3	1	334	1,473	317	635	17	838	108	12	..	..
1968 ..	2	56	93	927	31	675	2	154	60	100	..	..
1969 ..	265	190	297	145	32	3	184	130	80	10	1	2
Bardez ..	228	156	..	..	..	..	..	..	..	..	..	..
Ponda ..	†	†	112	13	32	3	..	..	80	10	†	†
Quepem ..	37	34	185	132	..	..	184	130	..	..	1	2

*Average workers employed.
† Value less than thousand.

Vasco-da-Gama, Loutulim, Curtorim and Quepem. Of these 51 units, 31 were only printing presses while four undertook binding works too. Other undertook manufacture of stationery articles besides printing job. Of these units, 10 were established prior to Liberation.

The total investment by way of fixed capital of all these units amounted to about Rs. 24,94,600·00 giving a per unit everage of Rs. 48,900·00, the highest being Rs. 7,65,000·00 and the lowest being Rs. 4,000·00. The total investment by way of working capital of 49 of these units came to Rs. 12,14,300·00 giving and average working capital investment per unit of Rs. 24,800·00 the maximum by a single unit being Rs. 4,50,000·00 and the minimum being Rs. 1,500·00. Forty-nine of these units provided employment to 310 workers giving an average employment per unit per day of 7 persons, the maximum number employed by a single unit being 50 and the minimum being one. The following statement gives the number of printing presses operated both by elecric power and manually and persons employed therein from 1965 to 1969 with a categorywise break-up of employment for 1969.

Year	Nimber of printing presses	Number of persons employed
1965	46	410
1966	35	346
1967	46	296
1968	47	380

CATEGORY-WISE BREAK-UP FOR 1969

Type of printing press	Number of printing presses	Compositors	Printers	Binders	Block makers	Other categories
1	2	3	4	5	6	7
Total ..	46(a)	192	91	76	5	136
Electric Power ..	39	182	84	73	4	135
Others ..	7	10	7	3	1	1

(a) One Printing Press from Ponda taluka remained closed during the year 1969.

Saw Mills.—The district of Goa has an area of 1,05,294·8091 hectares under forests. This large forest area has given impetus to the establishment of saw mills in the district. As on Mach 31, 1972, there were 36 saw mills in the district. They were located at Cacora, Siolim, Parra, Ponda, Margao, Mapusa, Bicholim, Cuncolim, Tivim, Quepem, Raia, Assonora, Moira, Sanquelim, Ribandar, Curchorem, Borim, Xeldem, Shelesem (Canacona), Old Goa, Panaji, Candeapar, Davorlim,

Neura, Navelim and Betim. The total fixed capital of 36 units came to Rs. 11,65,500 giving a per unit average of Rs. 32,400·00 the maximum amount invested by a single unit towards fixed capital being Rs. 1,25,000·00 and the minimum being Rs. 4,000·00. The total investment by way of working capital of 34 of these units came to Rs. 7,21,750·00 with a per unit average of Rs. 21,3000·00. The maximum amount invested by a single unit in working capital was Rs. 92,000·00 while the minimum was only Rs. 500·00. Thirty-six of these units provided employment to more than 261 persons giving a per unit average of seven persons per day. The maximum number employed by a single unit was nineteen and the minimum was two.

Other Forest Products.—Besides saw mills, there were 28 other units engaged in the manufacture of other forest products such as carpentry, workshops, photo frames, packing cases, wooden furniture, country crafts, etc. They were located at Margao, Borim, Mapusa, Ponda, Cumbarjua, Surla, Siolim, Pale, Verem, Sanvordem, Sanquelim, Farmaguddi, Cuncolim, Corlim Industrial Estate, Navelim, Panaji, Curti, Majorda and Davorlim.

The total fixed capital investment of 27 of these units came to Rs. 8,99,700·00 giving a per unit average of Rs. 33,300·00, the maximum invested by a single unit towards fixed capital being Rs. 2,78,000·00 and the minimum being Rs. 200·00. The working capital investment of 25 of these units came to about Rs. 4,26,800·00. It gave an average working capital per unit of Rs. 17,100·00, the maximum by a single unit being Rs. 1,00,000·00 and the minimum being Rs. 600·00. The total employment provided by 25 of these units was 163, which gave a per unit average of more than six persons. The maximum number of persons employed by a single unit was 15 while the minimum was 1.

Leather works.—There were in the district as on March 31, 1970, 33 units engaged in the manufacture of leather goods such as air bags, hand bags, footwear, etc. These units were located at Calapur, Curchorem, Ponda, Dargalim, Mhardol, Sanquelim, Pale, Bicholim,Surla, Avedem, Betqui, Canacona, Savoi-Verem, Marcela, Siroda, Querim, Cuncolim, Assolna, Sangolda, Ambari, Utorda and Panaji. Of these, seven were established prior to Liberation of the district; one in 1940, one in 1945, three in 1947, one in 1948 and one in 1949.

The total investment by way of fixed capital of 31 of these units came to Rs. 93,000·00 giving a per unit average fixed capital of Rs. 3,000·00, the maximum investment by a single unit being Rs. 23,000·00 and the minimum being Rs. 250·00. The total working capital of 31 of these units came to Rs. 58,230·00. This gave an average working capital of Rs. 1,880·00, the highest amount invested in working capital by a single unit was Rs. 25,000·00 while the lowest was Rs. 30·00. Nineteen

of these units provided employment to only one person each. Of the remaining, two units provided employment to a total of twenty-one persons, one employing eleven and the other ten. The remaining eleven units provided employment to 35 persons in all.

Steel furniture and Metal Industries.—As on March 31, 1972, there were in the district, 52 units engaged in the manufacture of steel furniture and other metal industries. Of these, only one was established in 1960. These units are located at Porvorim, Cacora, Curtorim, Moira, Ponda, Margao, Sanvordem, Mapusa, Mhardol, Betim, Corlim Industrial Estate, Vasco-da-Gama, Navelim, Panaji, Bicholim, Curchorem and Cortalim.

The total investment by way of fixed capital of 48 of these units came to Rs. 23,91,200·00 giving a per unit average of Rs. 49,800·00, the maximum investment by way of fixed capital of a single unit being Rs. 2,50,000·00 and the minimum being Rs. 4,250·00. These 47 units invested Rs. 21,62,000·00 towards working capital. The average working capital per single unit came to Rs. 46,000·00. The maximum amount utilised by a single unit towards working capital was Rs. 3,40,000·00 as against Rs. 1,000·00 which was the minimum by a single unit. All the 52 units provided employment to 499 persons with an average of ten persons per unit. The maximum number of persons employed by a single unit stood at fifty while the minimum was two.

Workshops.—There were in the district 121 workshops including 49 engaged in auto repairs and eleven engaged in the construction and repairs of barges. Of the 49 units engaged in repairs to automobiles some were also engaged in the manufacture of window grills and such other items. These workshops, besides repairs of automobiles and construction and repairs of barges, were engaged in battery servicing and repair, manufacture of silencers, washers, bolts, plugs, spanners, trunks, *ghamelas*, buckets, agricultural implements, wire nails, penal pins, surgical and hospital equipments, etc.

Of these 121 workshops, 49 were automobiles workshops. These were located at Margao, Cacora, Bicholim, Vasco-da-Gama, Curti, Mapusa, Sanquelim, Panaji, Porvorim, Pernem, Cumbarjua, Navelim, Cortalim, Usgao, Betim, Curchorem, Quepem, Parra, Velguem, Cuncolim and Guirim.

The total investment of 48 of these units by way of fixed capital was to the tune of Rs. 1,18,04,500·00 giving an average fixed capital investment of Rs. 37,600·00. The maximum investment by way of fixed capital by a single unit was Rs. 3,00,500·00 while the minimum was Rs. 1,000·00. The total working capital of 44 of these units came to Rs. 9,25,300·00 with a per unit average of Rs. 21,000·00, the

maximum for a single unit being Rs. 5,74,000·00 and the minimum being Rs. 300·00.

All these units provided employment to 302 persons with a per unit average of six persons.

In the district there are eleven units engaged in the construction and repair of barges. The industry assumes importance in view of the fact that barges are necessary to maintain the economy of the district which is principally based on mining. These units constructing and repairing barges are located at Sirigao, Margao, Panaji, Chicalim (Vasco-da-Gama), Vasco-Da-Gama, Candola and Cortalim.

The total investment by way of fixed capital of nine of these units came to Rs. 15,65,100·00 which gave an average investment in fixed capital of Rs. 1,73,900·00. The maximum investment by way of fixed capital by a single unit stood at Rs. 3,20,000·00 while the minimum was Rs. 30,000·00.

The total working capital requirement of these units came to Rs. 29,11,500·00 with a per unit average of Rs. 3,23,500·00, the maximum by a single unit being Rs. 10,67,000·00 and the minimum being Rs. 15,000·00. Of these 11 units, ten units provided employment to 700 persons. The average employment provided by a single unit was 70. The maximum number employed by a single unit stood at 188 as against eight which was the minimum.

The total investment in fixed capital of 52 of the remaining 61 units came to Rs. 19,64,000·00 giving a per unit average of Rs. 37,800·00, the maximum amount invested towards fixed capital by a single unit being Rs. 5,32,540·00 and the minimum being Rs. 500·00. The total working capital requirement of these units was to the tune of Rs. 23,86,600·00 in respect of 54 of these units. This gave the average working capital per unit of Rs. 44,200·00. The maximum working capital investment by a single unit stood at Rs. 6,00,000·00 as against Rs. 450·00 which was the minimum.

Fifty-five of these units provided employment to 567 persons giving an average of ten persons per unit. The maximum number of persons employed by a single unit was 152 and the minimum was one.

Coconut Oil Extraction.—By the end of December 1969, there were in the district, 147 establishments engaged in the extraction of coconut oil. Of these, only 74 were working units. These units provided employment to 108 persons. The total raw materials consumed by these units were 1,82,054 kgs. of coconut valued at Rs. 4,47,852·00. Of the total raw coconut utilised for the extraction of oil, a quantity of 4,175 kgs. valued at Rs. 10,271·00 was produced by one unit, a quantity a quantity of 1,39,907 kg. valued at Rs. 3,44,170·00 was belonging to of 37,972 kgs. valued at Rs. 93,411·00 was obtained from others, and a quantity of 1,39,907 kgs. valued at Rs. 3,44,170·00 was belonging to

others. The total annual output of oil came to 1,36,909 kgs. valued at Rs. 5,32,575·00. An amount of Rs. 16,336·00 was collected from the extraction of coconut oil belonging to others. The following table gives the statistical details regarding the industry from 1965 to 1969 with talukawise details for 1969.

TABLE No. 15.—STATISTICS ON INDUSTRIES ENGAGED IN THE EXTRACTION OF COCONUT OIL.

Year	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Raw Materials (copra)			
				Total		Own Production	
				Kg.	Rs.	Kg.	Rs.
1	2	3	4	5	6	7	8
1965 .	148	73	94	6,94,504	n.a.	28,774	n.a.
1966 ..	121	63	85	4,86,394	n.a.	3,775	n.a.
1967 ..	141	63	86	5,59,708	18,19,055	38,780	1,26,035
1968 ..	137	59	69	2,62,216	7,86,648	21,227	63,681
1969 ..	147	74	108	1,82,054	4,47,852	4,175	10,271
1969—							
Tiswadi ..	9	4	4	6,894	16,959	....	....
Salcete ..	56	32	50	76,519	1,88,237	3,172	7,803
Bardez ..	31	18	25	54,006	1,32,854	230	566
Mormugao ..	6	4	9	25,296	62,228	....	....
Ponda ..	11	5	7	968	2,381	713	1,794
Bicholim .	3	2	3	6,813	16,760	....	....
Pernem ..	14	2	2	233	573	60	148
Quepem ..	8	3	3	2,364	5,816	..	....
Sanguem ..	4	1	1	800	1,968	....	....
Canacona ..	5	3	4	8,161	20,076	....	....

Year	Raw Materials (copra)				Output		Amount collected towards oil extraction
	Acquired from others		Belonging to others		Oil		
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.	Rs.
1	9	10	11	12	13	14	15
1965 ..	13,542	n.a.	6,52,188	n.a.	4,63,960	n.a.	46,310
1966 ..	1,14,462	n.a.	3,68,157	n.a.	3,01,901	n.a.	42,302
1967 .	90,569	2,94,350	4,30,359	13,98,670	3,51,165	21,06,990	53,516
1968 ..	39,093	1,17,279	2,01,896	6,05,688	1,64,719	8,23,595	22,959
1969 ..	37,972	93,411	1,39,907	3,44,170	1,36,909	5,32,575	16,336
1969—							
Tiswadi ..	....	....	6,894	16,959	4,182	16,270	689
Salcete ..	20,453	50,315	52,894	1,30,119	73,548	2,86,100	6,429
Bardez ..	867	2,133	52,909	1,30,155	32,591	1,26,778	5,216
Mormugao ..	5,866	14,430	19,430	47,798	15,374	59,805	2,015
Ponda ..	255	627	....	....	476	1,852	89
Bicholim ..	....	....	6,813	16,760	4,760	18,516	820
Pernem ..	173	425	....	....	155	603	24
Quepem ..	2,197	5,405	167	411	131	510	310
Sanguem ..	....	....	800	1,968	250	972	64
Canacona ..	8,161	20,076	....	....	5,442	21,169	680

Groundnut Oil extraction.—There was in the district, only one unit engaged in the extraction of groundnut oil as on December 31, 1968, located in the Ponda taluka. It provided employment to only two workers. The total raw materials consumed by the unit during the year came to 32,000 kgs. valued at Rs. 51,200·00 and the entire quantity of raw material was acquired from others. The total annual output of oil came to 12,800 kgs. valued at Rs. 39,460·00. Oil cake was the by-product of the unit. During the year, the unit produced 19,200 kgs. of oil cake valued at Rs. 11,740·00. The table that follows gives the statistics regarding the industry from 1965 to 1968.

TABLE No. 16.—GROUNDNUT OIL EXTRACTION

Year	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Raw Materials (Groundnut)					
				Total		Own Production		Acquired from others	
				Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1965 ..	1	1	6	50,000	N.A.	50,000	N.A.	....	N.A.
1966 ..	1	1	6	18,000	N.A.	18,000	N.A.	....	N.A.
1967 ..	1	1	4	65,000	1,10,690	....	....	65,000	1,10,690
1968 ..	1	1	2	32,000	51,200	....	....	32,000	51,000

Year	Raw Materials (Groundnut)		Output		By-Product	
	Belonging to others		Oil		Oil Cake	
	Kg.	Rs.	Kg.	Rs.	Kg.	Rs.
1965	....	N.A.	20,000	N.A.	N.A.	N.A.
1966	....	N.A.	7,200	N.A.	N.A.	N.A.
1967	....	....	26,000	92,000	38,000	19,000
1968	. ..	....	12,800	39,460	19,200	11,740

Miscellaneous.—Besides small scale industrial units described so far, there were in the district, 13 miscellaneous industrial units engaged in various industries such as manufacture of fireworks, glue, tacks and staples, nylon socks, cardboard boxes, hydraulic brake fluid, laboratory equipment, fishing nets, threads, tooth powder, tin containers and matrix boards.

These units were located at Margao, Panaji, Sanvordem, Mapusa, Sanquelim, Calangute and Benaulim. The fixed capital investment of twelve of these units put together came to Rs. 5,40,000·00 giving a per unit average of Rs. 45,000·00, the maximum by a single unit being Rs. 2,63,000,00 and the minimum being Rs. 1,245·00. The working capital of these twelve units came to Rs. 4,92,000·00 with a per unit

average of Rs. 41,00·00, the maximum amount invested by way of working capital by a single unit stood at Rs. 2,95,000·00 as against Rs. 11,500·00 which was the minimum.

These twelve units provided employment to 240 persons giving a per unit average of 20 persons. The maximum number of persons employed by a single unit was 36 while the minimum was two.

Industrial Estates

The establishment of industrial estates is altogether a new concept and has been adopted by almost all the States. The establishment of the industrial estates envisages establishment of industries concentrated at a place where facilities for land, water, power, etc. are provided by the Government or by co-operatives.

The Government of Goa, Daman and Diu have established the Goa, Daman and Diu Industrial Development Corporation under the Goa, Daman and Diu Industrial Development Act, 1965. The said authority has been made responsible for expediting the development of industries and managing industrial estates and industrial areas, etc.

The Goa, Daman and Diu Industrial Development Corporation has already established industrial estates at Corlim and S. Jose de Areal and has taken steps to establish such estates at Sancoale and Mapusa.

Corlim Industrial Estate.--The industrial estate at Corlim near Panaji has been established on an acquired area of 62,868 sq. metres dividing into parts an industrial area comprising eight plots and an industrial estate providing 55 plots for built up sheds, in the year 1967. The first phase of the development of the Corlim Industrial Estate was completed in July 1967 and water and electric supply was made available to the units in February 1968. Almost all the amenities/works were completed in the second phase by December 1970. The total number of built up sheds by the end of the second phase programme is 34 in two types.

All the 34 sheds have been allotted and occupied by the small scale units and they are engaged in the manufacture of items like mosaic tiles, plastic items, fruit and fish canning, nylon cloth, wooden furniture, steel fabrication, pickles, wines, paints, etc.

Eleven small scale industrial units are on the waiting list and have paid the required deposit of Rs. 1,000·00 for the reservation of the sheds but due to the non-availability of the sheds, the allotment could not be made in their favour. The products to be manufactured by these eleven units are fire fighting equipment, organic and inorganic chemicals, electronic goods, food products, etc.

Corlim Industrial Estate has been well developed in respect of infrastructure facilities and other amenities like canteen, bank, post office,

etc. and no further development is to be done by the Corporation except the construction of additional sheds and tenements for workers.

The Corporation has acquired an area of 13,000 square metres for the construction of tenements for workers and staff quarters for those employed in the various industrial units in the Corlim Industrial Estate. The work of construction of these tenements will be done by the Housing Board under the industrial housing scheme.

Margao Industrial Estate.—Another industrial estate has been established at Margao, 10 kms. away from Margao city in the southern part of Goa. A total area of 1,50,000 square metres has been acquired and it has been divided into industrial estate and industrial area.

An area of 40,000 square metres divided into 54 plots has been earmarked as industrial area whereas 63 plots of 1,000 square metres each have been reserved for construction of 63 sheds in three types in the layout of this industrial estate.

Initially, in the year 1968-69, 20 sheds were constructed and these sheds have been allotted and occupied by the prospective industrialists. All the units have gone into production. They undertake the manufacture of zip fasteners, nylon fishing nets, PVC footwear, packing materials, cutting tools, heavy machinery, drums, etc.

Margao being a central commercial town, the industrial estate at Margao got a very good response. There are thirty-five applications on the waiting list from entrepreneurs for the sheds in this industrial estate who want to take over the possession of the sheds as early as possible. Taking into consideration the response from them, within a period of 6 to 8 months, the construction of 19 additional sheds in three types amounting to Rs. 12,09,000·00 were taken in hand and these were ready by December 1971 for allotment. The units which occupy the sheds manufacture varnish, plastic items, aerated waters, aluminium milk cans, electric goods, machinery of wire drawing, nuts and bolts, rubber goods, organic and inorganic chemicals etc. Since only nineteen sheds were constructed, the Corporation was not able to allot any additional sheds to other parties who were on the waiting list. The first phase of the programme was completed in respect of this industrial estate in May 1970 and the water and electricity supply was made available to the units in June 1970.

Similarly, 54 plots with an area of 40,000 square metres was earmarked for the development of industrial area. The following units were allotted the area shown against each :

(1) Messrs. Goa Agro Chemicals Pvt. Ltd. ... 20,000 square metres.
(2) Messrs. Karpe Glass Works .... 10,000 square metres.
(3) Messrs. Pesticides India Ltd. .... 10,000 square metres

The following statement gives the details of expenditure incurred on the industrial estates at Corlim and Margao.

Item No.	Corlim	Margao
	Rs.	Rs.
(1) *Price of land* :		
(*i*) For estate and area ..	3,00,500	3,29,000
(*ii*) For workers tenements ..	65,000	....
(2) (*i*) Construction of sheds ..	12,53,400 (34 sheds in 2 types)	21,74,600 (39 sheds in 3 types)
(*ii*) Construction of canteen buildings, administrative and other buildings.	2,10,600	....
(3) *Land Development Works* :		
(*i*) Fencing	29,000	21,500
(*ii*) Roads	1,11,000	2,56,650
(*iii*) Drainage	47,200	74,600
(*iv*) Street lights	3,500	....
(*v*) Water Supply Schemes ..	87,700 (only storage tank and distribution lines)	1,63,900 (including overhead reservoir, pump, well and distribution lines)
4) *Other Expenditure* :		
(*i*) Vehicles	....	79,000
Total ..	21,07,900	30,99,250

Sancoale Industrial Estate.—After the setting up of the two previously mentioned industrial estates, there was a great demand from the industrialists for setting up an industrial estate at Sancoale.

In view of the setting up of the big fertilizer project of Messrs. Zuari Agro Chemicals Limited, on enquiries from the concerned authorities, the Zuari Agro Chemicals Limited, gave a list of sixteen ancilliaries that can come up in the industrial estate at Sancoale. To assess the response for these ancilliary industries, applications were invited from the local entrepreneurs. A hundred and ten applications were received from parties who had shown their desire to set up these ancilliary industries.

Accordingly, 16 parties were selected on merit and the Corporation decided to set up an industrial estate to house these 16 units by constructing 16 sheds only. The Corporation has acquired an area of 1,00,000 sq. metres for this purpose and ear-marked 40,500 sq. metres for construction of sheds and an area of 53,000 sq. metres for plots in industrial areas. One chemical factory and one brewery has reserved the entire area in the Sancoale Industrial area.

All the parties have booked the sheds by paying the deposits prescribed by the Corporation. The works of fencing and construction of roads has been completed. Construction of 11 big super A type sheds in this estate has also been completed.

Mapusa Industrial Estate.—No factories or industries were set up due to various reasons in the northern part of the river Mandovi. In order to provide equal opportunities to people of that part of Goa, the Corporation assessed the demand for setting up an industrial estate at Mapusa which was well responded to by the industrialists and African repatriates from that place.

At present, a number of small industries are located in the city of Mapusa.

Initially, the Corporation has submitted a proposal for land acquisition for an area of 50,000 sq. metres which is at the stage of completion.

The following table gives the detailed information in respect of all the industrial estates and areas in the district. (Table on p. 368).

SECTION II—COTTAGE INDUSTRIES

In the rest of the country, cottage industries had, since centuries, been the backbone of the village economy. The autonomous villages were self-sufficient with agriculture, of course, being the main occupation supplemented by subsidiary occupation such as oil *ghanis*, cotton weaving, pottery making etc. However, in the district of Goa, the development of even these industries which could provide some employment potential to the masses, as these industries do not require any specific skill or specialised knowledge and require neither machinery nor huge capital, was entirely neglected by the Portuguese rulers.

The main activities of handicrafts in the district are pottery-making, wood carving, lacquerware, brassware and bamboo work. The master craftsmen specialising in the manufacture of pottery are to be seen at Bordem-Bicholim. Bicholim is a centre for the manufacture of brassware. Woodcraft is carried out at Cuncolim (Salcete) which is also a centre of lacquerware. The handicrafts produced in the district are considered to be of the highest standard in the entire country. Two of the master craftsmen of the district were given awards for their work in pottery and ivory.

Besides, there are two handloom co-operative societies in the district. Shri Vitol Vinakar Sahakari Audyogik Utpadak Society Limited, was established at Paliem in Pernem taluka and the Bardez handloom weavers' Audyogik Utpadak Co-operative Society Limited was established at Bastora in Bardez taluka. Of these handloom co-operative

TABLE No. 17.—INFORMATION IN RESPECT OF ALL INDUSTRIAL ESTATES AND AREAS IN GOA DISTRICT.

Name of the Estate Town	Total Area	No of sheds proposed	No of plots proposed	No of sheds constructed	No of sheds allotted	No of units gone into production	Expenditure on the estate upto 31-3-1971	No of persons employed in the estate	Total Investment by units	Production capacity in value per annum	No of sheds under construction	No of parties on waiting list
1	2	3	4	5	6	7	8	9	10	11	12	13
Corlim Industrial Estate	62,968 00m²	A type—8 C type -47	28 19m—8 nos for A type sheds 27 18m—39 nos for C type sheds	A type – 8 C type -29	34	17	17,71,077	234	33,35,500	26 06,000		11
Margao Industrial Estate .	1 50,000 00m²	A1 type —22 A2 type —18 A3 type —20	20 50m—22 nos for A1 type sheds 20 × 50m—18 nos. for A2 type sheds 20 50 m—6 nos and 13 × 34m—14 nos for A3 type sheds	A1 type —6	20	13	17 98,390	200	30,00,000	35,00,000	19	35
Sancoale Industrial Estate	1,00,000·00m²	Super A type—11 nos. S1 type —2 nos. S2 type —5 nos.	23 × 64m—14 nos for Super A type 20 × 50m—11 nos. for S1 and S2 type sheds 46 × 64m—1 no site for Admn. Bldg.	..		..	..	..	..	..	..	12
Mapusa Industrial Estate	47,100·00m² (Land not acquired)	17 nos.	20 × 50m—17 nos	..	..		..	..	..	..	..	12

societies, only the latter is functioning at present. It has a membership of 24 and a share capital of Rs. 2,376·00. The number of working looms is 92.

By the end of 1969, there were in the district, 21 cotton handloom factories of which 19 were in operation. These factories had 98 looms and they provided employment to 88 workers. The total production of textile fabrics of these handloom factories during the year came to 11,703 kgs. valued at Rs. 1,43,457·00. A number of different textile products were produced during the year. The following table gives the statistics regarding different items manufactured, their quantity and value, from 1965 to 1969 with details for 1969.

TABLE No. 18.—COTTON TEXTILE—HANDLOOM FACTORY

Year/Taluka	Establishments existing as on 31-XII	Establishments in operation as on 31-XII	Workers employed as on 31-XII	Looms existing as on 31-XII	Total	
					Kgs.	Rs.
1	2	3	4	5	6	7
1965	67	50	163	149	45,688	2,29,622
1966 ..	67	38	149	136	10,504	1,14,665
1967	66	34	86	138	15,050	1,67,428
1968	56	34	78	110	12,688	1,61,694
1969 .	21	19	88	98	11,703	1,43,457
1969 · ..						
Bardez	8	7	46	58	5,123	78,033
Ponda ..	7	7	18	18	2,760	30,374
Pernem .	6	5	24	22	3,820	35,050

Year/Taluka	Production of Textile Fabrics							
	Dress Pieces				Shawls		Blankets	
	Cotton		Rayon					
	Kgs.	Rs	Kgs.	Rs.	Kgs.	Rs.	Kgs.	Rs.
1	8	9	10	11	12	13	14	15
1965 ..	22,092	1,27,552	.	..	N.A.	N.A.	1,837	12,193
1966 ..	4,425	54,432	141	5,860	N.A.	N.A.	22	180
1967 ..	5,994	81,603	52	1,780	N.A·	N.A.	..	..
1968 .	7,663	1,18,698	.		1,506	11,051	..	.
1969 ..	3,996	63,647	..	..	3,968	37,223	..	..
1969 :								
Bardez ..	3,996	63,647	..	..	167	1,858	..	..
Ponda ..	..	..	..	..	1,201	12,240	..	..
Pernem ..	..	..	..	..	2,600	23,125	..	..

TABLE No. 18—contd.

Year/Taluka	Production of Textile Fabrics					
	Coverlets		Towels		Kerchiefs	
	Kgs.	Rs.	Kgs.	Rs.	Kgs.	Rs.
1	16	17	18	19	20	21
1965 ..	616	7,125	247	1,700	19,949	69,427
1966 ..	342	3,523	313	3,835	5,221	46,535
1967	518	4,546	28	255	8,390	78,155
1968 ..	310	2,315	41	675	3,168	28,685
1969 ..	14	273	....	....	3,468	39,275
1969 :						
Bardez ..	14	273	....	...	847	10,647
Ponda ..	..	..	..	...	1,519	17,603
Pernem ..	...	..	....	.	1,120	11,025

Year/Taluka	Production of Textile Fabrics					
	In pieces		Other Textile		Quantity and value of existing stock in ware-house as on 31-XII	
	Kgs	Rs.	Kgs.	Rs.	Kgs.	Rs.
1	22	23	24	25	26	27
1965 .	131	1,400	816	10,225	461	3,675
1966	..	....	40	300	1,987	26,613
1967 ..	38	981	30	108	239	5,249
1968 .	..	...	....	....	40	399
1969 ..	50	720	189	2,319	454	4,471
1969 .						
Bardez ..	50	720	49	888	30	589
Ponda ..	....	.	40	531	24	282
Pernem .	..	...	100	900	400	3,600

A number of persons were engaged in miscellaneous cottage industries that undertook manufacture of dolls, idols, images, lockets, camphor balls, etc. These were skilled workers whose products had a fluctuating demand.

Besides, there were in the district, a number of blacksmiths, carpenters, potters and cane workers who served the rural areas of the district. These ancilliary small cottage industries provided subsidiary occupations to a number of persons whose principal occupation is agriculture. Many of the agriculturists now take to poultry farming and such other ancilliary occupations.

Handicraft Emporium, Panaji

With a view to promoting the handicraft industry in the district of Goa, the Government set up the Handicrafts Emporium on May 10, 1966. It is located in the Tourist Hostel premises, Panaji, tourists being

the chief patrons of handicrafts. It serves as a sale outlet for handicrafts produced in the district, where the handicrafts produced in the rest of the country are also displayed. Since the establishment of the Handicrafts Emporium, the total purchase of handicrafts has amounted to Rs. 95,756·23 and the total sales to Rs. 8,294·28. The handicrafts products of the district were also displayed in the Fifth National Agricultural Fair held at Bombay in 1969. They were also displayed in the Goa Agricultural Fair held at Campal, Panaji, held from 19th December 1969. The Handicrafts Emporium has been taken over by the Maharashtra Small Scale Industrial Development Corporation from October 1975.

Financial Assistance to Industries

The industrial development in Goa district is of recent origin. During the Portuguese regime there were hardly any industrial units. The industrial activities in the district were mainly confined to mining which did not receive any financial assistance or encouragement from the Government. Non-availability of finance greatly hindered the development of industrial growth. Since liberation, the Government have taken keen interest in the industrial development of the district and a number of schemes have been chalked out accordingly, under which financial aid is granted by the State to different industrial establishments including village artisans and their co-operative societies. Government as well as financial institutions have introduced various schemes to assist small-scale industries to obtain their long-term and medium-term financial requirements on liberal terms. Under the Goa, Daman and Diu State Aid to Industries Act, 1965, the Government have rendered the loan to the tune of Rs. 1,00,000·00 for purchase of fixed assets and working capital. Loans are sanctioned in the following manner :—

(1) Loans upto Rs. 1,000·00 are granted on personal bond;

(2) Loans exceeding Rs. 1,000·00 upto Rs. 5,000·00 are granted on one or more personal securities;

(3) Loans exceeding Rs. 5,000·00 are granted against the security of moveable or immoveable property.

Loans against security are granted to the extent of 75 per cent. of the security offered. These loans bear simple interest of 6 per cent. at present and are repayable in 10 years in case of fixed assets and five years in case of working capital. The first instalment in case of working capital commences one year after the date of disbursement and after two years in case of loans granted for other purposes. Loans are also made available under the Rural Industrial Project Scheme, by the Directorate of Industries with interest at the rate of 3 per cent. repayable in ten years. This incentive is given to small and cottage industries coming up in rural areas.

The following statement gives yearwise break-up of loans granted under Rural Industries Project programme in the district since its incepton:—

Year	No. of parties	Total amount Rs.
1963-64	15	32,950·00
1964-65	9	38,600·00
1965-66	43	2,01,700·00
1966-67	42	1,85,000·00
1967-68	24	1,20,000·00
1968-69	16	1,13,000·00
1969-70	15	74,000·00
1970-71	12	54,900·00
1971-72	15	74,930·00
1972-73	15	74,850·00
	Total ...	9,69,930·00

The Directorate of Industries make available loans on long term basis to artisans, cottage units and small industries, liberally. The following statement reveals the amount of loans disbursed, in the district, through the Directorate of Industries from 1962-63 to 1972-73.

Year	No. of units	Amount Rs.
1962-63	25	95,070·00
1963-64	45	1,29,450·00
1964-65	163	2,33,150·00
1965-66	150	3,16,925·00
1966-67	68	3,12,200·00
1967-68	41	2,50,000·00
1968-69	27	2,16,900·00
1969-70	22	1,05,000·00
1970-71	18	2,19,100·00
1971-72	9	1,44,100·00
1972-73	13	1,38,850·00
	Total ...	21,60,745·00

Similarly the Directorate of Industries advances loans to industrial co-operatives in the district. An account of the same is given in the following statement :—

Year	No. of units	Amount Rs.
1962-63	1	35,000·00
1963-64	6	53,510·00
1964-65	2	40,000·00
1966-67	1	2,500·00
1967-68	4	21,000·00
1968-69	2	7,600·00
	Total ...	1,59,610·00

The agencies which cater to the financial needs of industries have also recorded a sizeable rise in the district. Apart from the office of the Directorate of Industries, there have come up offices of the Small Industries Service Institute, the Maharashtra State Financial Corporation, the Maharashtra Small Scale Industrial Development Corporation, the Goa, Daman and Diu Industrial Development Corporation, the Minerals and Metals Trading Corporation, etc.

SECTION III—LABOUR ORGANISATIONS

Industrial Potential and Plans for Future Development

Numerous facilities and incentives under the Backward Area Development, Rural Industries Project and Rural Artisans programmes are available for development of small industries in Goa. Three industrial estates have also been set up. According to the Census of Small Industries Units there are 627 small scale units manufacturing a wide range of products. About 20 large and medium scale units have also been set up in the district. Considering the availability of resources, industrial infra-structure, size of the market and also keeping in view the overall strategy of development about 50 industries have been suggested for the development in the small scale sector.

Fifth Five Year Plan Proposals. –It is expected that during the Fifth Five Year Plan, 1,000 more small industrial units and five large and medium Industrial Units will be established which will provide employment to about 13,000 persons with the capital investment of Rs. 4 crores approximately.

Industries recommended[1] for location in Goa in the period 1963 to 1975 is given in the Appendix 9.

[1] Techno-Economic Survey of Goa, Daman and Diu—NCAR, 1964 p. 234.

Labour Organisations

Various labour laws were extended to this district since the Liberation in December 1961. The administration of these labour laws vests in the Commissioner of Labour who is also the Registrar of Trade Unions under the Trade Unions Act, 1926. There are 78 Trade Unions registered under the Act. At present, forty trade unions are functioning in the district. The following statement gives the membership of these trade unions :—

Serial No.	Name of the Trade Union and Address	Membership
1.	All Goa General Employees' Union, Vasco-da-Gama.	398
2.	Bank of Baroda Employees' Union, Panaji ...	94
3.	Central Bank Employees' Union, Goa Branches, Panaji.	79
4.	Chowgule Employees' Union, Marmagao Harbour.	335
5.	Chowgules' Mechanical Ore Handling Division, Marmagao Power House and Barge Workers' Union Vasco-da-Gama.	301
6.	Communidades Employees' Association, Margao. .	102
7.	Dena Bank Employees' Union (Goa Branches), Panaji.	16
8.	Goa Bank Employees' Association, Panaji ...	214
9.	Goa Bargemen's Union, Vasco-da-Gama ...	230
10.	Goa Bus and Taximen's Federation, Vasco-da-Gama.	211
11.	Dock Labour Union, Vasco-da-Gama ...	5,627
12.	Goa Government Employees' Association, Panaji.	214
13.	Goa Government Employees' Union, Panaji.	N. A.
14.	Goa Industrial and Commercial Employees' Union, Quepem.	65
15.	Goa Industrial, Commercial, Port and Dock Workers' Union, Panaji.	48
16.	Goa Mazdoor Sabha, Margao ...	98
17.	Goa Mining Labour Welfare Union, Assonora.	1,600
18.	Goa Municipal Workers' Union, Vasco-da-Gama.	719
19.	Goa Seamen's Association, Vasco-da-Gama.	360
20.	Goa Shipyard Labour Union, Vasco-da-Gama.	450
21.	Goa Shipyard Limited Staff Association, Vasco-da-Gama.	19
22.	Goa Shipyard Workers' Union, Vasco-da-Gama.	263

Serial No.	Name of the Trade Union and Address.	Membership.
23.	Goa State Co-operative Bank Employees' Union, Panaji.	23
24.	Goa Taximen's Association, Vasco-da-Gama.	345
25.	Goa Trade and Commercial Workers' Union, Assonora.	216
26.	Goa Union of Journalists, Panaji ...	21
27.	Goa Urban Co-operative Bank Limited Employees' Union.	14
28.	Government of India Navigation Employees' Union, Panaji.	172
29.	Insurance Corporation Employees' Union, Panaji.	25
30.	Marmagao Godi Kamgar Sangh, Vasco-da-Gama.	100
31.	Marmagao Port and Railway Workers' Union, Vasco-da-Gama.	1,070
32.	Marmagao Port Trust Marine Officers' Association, Vasco-da-Gama.	16
33.	Marmagao Stevedores Staff Association, Vasco-da-Gama.	100
34.	Marmagao Waterfront Workers' Union, Vasco-da-Gama.	2,095
35.	National Defence Employees' Union ...	32
36.	National Mine Workers' Union, Curchorem, Sanvordem.	1,943
37.	Newspaper and Press Employees' Union, Vasco-da-Gama.	54
38.	Shantilal Khushaldas Bros. and S. Kantilal ... and Company, Limited, Head Office Staff Association, Margo.	60
39.	The Minerals and Metals Trading Corporation (Goa Region) Employees' Union, Vasco-da-Gama.	117
40.	Transport and Dock Workers' Union, Vasco-da-Gama.	725

No employers' organisation has been registered so far. However, the Goa Chamber of Commerce and Industry, the Goa Mineral Ore Exporters' Association and the Goa Mining Association at Panaji and Marmagao Stevedores Association located at Vasco-da-Gama are functioning in the district.

Welfare of Industrial Labour.—With a view to making welfare facilities available to the industrial labourers, a Labour Welfare centre was established at Bicholim in December 1968. The Centre provides facilities for training in sewing and embroidery and also the facilities for indoor and outdoor games. Library facilities are also provided by the Centre. The advantage of this Centre is availed of by 30 industrial workers and their families. Labour Welfare Centres are also proposed to be established at Margao and Vasco-da-Gama.

The industrialists in Goa have taken some steps for labour welfare. Messrs. Chowgule and Company Private Limited, and Mormugao Port Trust have provided housing facilities to their workers. Besides they also provide recreational facilities such as indoor and outdoor games, reading rooms, libraries, etc.

* * *

CHAPTER 6—BANKING, TRADE AND COMMERCE

MONEY LENDERS

Introduction

The system of money lending can be said to have originated with the introduction of coinage and currency in the country. The institution of money lenders has been in existence ever since money was accepted as a medium of exchange by society. The early history of money lenders in the district cannot be traced in the absence of relevant records or documents. However, it may be said that money lending as a business had always existed during the long rule of the Portuguese. Ancestral debts and constantly recurring small items of debts for food and other necessities, social and religious ceremonies, for purchase of seeds, bullocks, etc. are the principal reasons for enhancing rural indebtedness. Debts were often incurred on non-productive expenditure. Agriculturists have always faced the imperative need for loans and the money-lender was the only agency to cater to it. The money lender served the village in a number of ways other than as a supplier of credit. Except for the 'Banco Nacional Ultramarino' there were no banking establishments or professional money lenders like shroffs or indigenous bankers, as was witnessed in the rest of the country. However, in an hour of need the necessary money could be borrowed from wealthy proprietors (*Bhatkars*) and from religious confraternities or charitable institutions. Advances against grain were sometimes similarly made. There were scarcely any professional brokers and brokerage business was hardly developed in the district.

The debtors class consisted mostly of tenants or tenant cultivators, and village artisans who owed a large amount of chronic debt. The debtor class as a rule was the worst sufferer at the hands of the proprietors (*Bhatkars*) or money-lenders and there were for a very long time no legal provisions to safeguard the interests of the debtors.

Malpractices of money lenders

The pecuniary needs of the weaker section were generally met by money lenders without insisting on any type of tangible security. The money lenders were not particular at all in the maintenance of proper and scrupulous accounts of the transactions, perhaps to manipulate

and to misguide the ignorant villagers with a view to grabbing the land and other properties of the weaker sections. They charged exorbitant rates of interest, very often in kind, which the debtors felt obliged to pay. Even the heirs of the original (deceased) debtors had to redeem the debt burden of their predecessor without verifying the genuineness of accounts. As a result, the amount received in the form of interest itself, was always much more than that of the principal sum. Money lenders always tried to maintain and prolong the period of the debts so as to derive continuous income in the form of interest. The debtors, however, poor as they were, were even compelled to part with a portion of their produce to the creditors, not to go against the wishes of the money lenders or stop payment of interest, on account of economic and social subjugation. This situation rendered them into almost perpetual indebtedness and they were not in a position to come out from this vicious circle. Goa was no exception to the popular saying, "the Indian tenant is born in debt, lives in debt and dies in debt." Money lenders took full advantage of the stringent situation in which the debtors were often caught and compelled them to enter into unjust and fraudulent agreements. Faced with the danger of losing lands due to their inability to pay the arrears of land revenue, the debtors used to give promissory notes to the money lenders, knowingly or unknowingly, for much larger amounts than were really due. The money lenders, in course of time, took possession of lands offered as security for the amount of loan shown in the promissory notes thus depriving the debtors of their own lands. In many cases, the money lenders took away parts of the land owned by the debtors in lieu of the payment of interest on the loan issued. The value of the piece of land thus surrendered to the money lenders was much more than the amount of loan enjoyed by the cultivators. Many a time money lenders took the advantage of the illiteracy prevailing among the weaker sections of the society and put the amount of loan in black and white much more than the amount really advanced.

Similarly, the value of produce of such lands enjoyed by the creditors was much more than the interest due on the loans. Here also, legal transfer of lands was not taking place. Most of the debtors, claimed that they were in possession of papers providing their ownership of lands. The money lenders were not willing to accept the claim of the cultivators and insisted on keeping the lands in their possession. On the whole, the money lenders were placed in an elevated position in the district first due to their virtual monopoly in the field of providing credit, secondly due to the illiteracy and ignorance of the weaker sections of the society and finally due to the absence of any legal control or regulation by the foreign power who were least interested in the welfare of the masses.

Rate of Interest

The rates of interest the money lenders used to charge were very high. Due to litigious propensities of the people and the difficulty of obtaining speedy redress in courts of law, money-lenders seldom entered into large transactions without good security. Nevertheless some land owners occasionally advanced petty sums or their equivalents in kind without interest to those cultivators or agricultural labourers who worked in their fields or who lived on their land (*batt* or *palmares*), deducting the advance by monthly instalments from their wages. In the new conquests, however, the rate charged for an advance of grain was generally half as much as the value of the advance and sometimes more.[1]

Commission on Rural Indebtedness

With a view to putting an end to the squeezing of the weaker sections at the hands of these unscrupulous money-lenders and to stopping their malpractices and reduce their influence on rural economy, legal enactment was felt imperative. In order to study the extent and types of rural indebtedness amongst the weaker sections of the rural community, the Government of Goa, Daman and Diu appointed a commission on 'Rural Indebtedness' on November 25, 1968. The Commission was appointed with the specific objectives of relieving the vulnerable section of the community off their indebtedness; of restoring to them their properties which were seized or taken away as a result of rural indebtedness; of recommending suitable legislative measures to prevent rural indebtedness and safeguard the interest of the weaker sections of the rural communities; and of reporting to the Government on such matters relating to the same subject as may be referred to it by the Government.

A rapid survey of the types of rural indebtedness was conducted in a village of each of the talukas of Quepem, Canacona, Sanguem, Satari and Pernem. Accordingly, it was found that the cases of malpractices of money lenders took place many years back. Some of the debtors questioned did not even know the period when the transaction took place as the same had been entered into by their forefathers.

The Commission suggested that in the absence of documentary or convincing evidence of the transactions in support of the claims of the debtors, such cases may not be entertained, cases of indebtedness that have resulted into dispossession of lands long back cannot be re-opened and also in cases of rural indebtedness for restoration of the possession of lost lands, no action can be taken. The Commission also recommended that the rate of interest on loans and advances should not exceed six per cent per annum on loans on real security

[1] Fonseca, An Historical and Archaeological Sketch of the City of Goa, 1878.

and eight per cent per annum by the money lenders in any other cases of loans. A bill called Goa, Daman and Diu Agricultural Debtors Relief Bill, 1970, had been drafted.

BANKING

Introduction

The rapid development of the industrial sector and agricultural operations have made the 'Banking' system a vital necessity in accelerating the pace of prosperity of the backward regions. Banks are playing an important role and it has been considered a very progressive institution offering greater services to its clients all over the world.

Banco Nacional Ultramarino.—Prior to Liberation, the Banco Ultramarino with its head office in Lisbon was the only commercial bank operating in the Portuguese enclaves in India. This was a monopolistic State-aided bank which functioned solely for the purpose of backing the Government's financial policy. The prime purpose of the bank was to issue paper currency and to accept deposits. But it did not pay any interest on these deposits. It was not interested in helping local industry or financing any project. It had four offices in the district located at Panaji, Margao, Vasco-da-Gama and Mapusa. The total deposits of this bank in Goa as on the date of liberation were as under :—

Deposits from the public ...	Rs. 294·81 lakhs
Deposits from Government departments, Semi-Government institutions.	Rs. 605·52 lakhs
Total ...	Rs. 900·33 lakhs.

The bulk of deposits under Government and Semi-Government Institutions were accounted for by Port and Railways, Caixa Economica de Goa, Treasury Office and the Board of External Trade. Total loans and advances amounted to Rs. 267 lakhs mainly against the hypothecation of barges, trucks, earth-moving equipments, general merchandise and gold loans. No advances were granted by the bank to any of the small scale industries which were in existence prior to Liberation. All the depoits in the Bank were in the form of current accounts and it did not pay interest on the deposits. The rate of interest on advances was 4 to 5 per cent and thus the Portuguese rulers had neglected the development of the banking institution in the district.

Caixa Economica de Goa.—Another institution which functioned before liberation was 'Caixa Economica de Goa' a sort of quasi-

Government savings bank. It was carrying on insurance business on co-operative lines and it was subsequently converted into a bank now known as the 'Goa Urban Co-operative Bank' in the year 1964-65. This was started in 1947 as an autonomous institution and a legal entity. It was authorised to accept deposits from the public, municipalities, religious institutions and administrative bodies, etc. As a State sponsored institution it had certain special facilities such as its liabilities were guaranteed by Government, it enjoyed exemption from stamp duty and taxation, etc. It was maintaining about 65,000 accounts with deposits aggregating Rs. 4·83 crores. Interest was paid on the individual deposits. It advanced loans to Government, Semi-Government Departments, municipalities and *comunidades*, etc. to the tune of Rs. 268 lakhs and the interest charged varied between two and three per cent. Besides this, it advanced loans to private individuals and for construction of residential quarters in the cities.

As early as in 1930, some banking institutions had made efforts to open branches in the district but because of the unwillingness of the then Portuguese Government, this did not materialize. Thus, the district remained backward both agriculturally and industrially in the absence of patronage and banking facilities.

Due to the tremendous spurt in the developmental programmes in the district soon after liberation, the Indian banking industry extended its sphere of activities into this Union Territory from 1962 onwards. Other commercial banks were permitted to open branches in the district. During the past eleven years banks in the district have made remarkable progress in terms of the total deposits mobilised and in the expansion of the banking industry functionally, geographically and in terms of deposit growth and credit expansion. The State Bank of India opened its first branch in the district at Panaji on January 2, 1962 and this was followed by opening of offices at Margao and Vasco-da-Gama. The other commercial banks followed in quick succession in 1963. There are in all 126 commercial banks and co-operative banks operating in the district. The total number of banks in the district rose to 130 and 131 by 1974-75. The names of these banks, their location and the date of establishment are given in the Appendix 10.

At the end of 1968, there were 60 branches of banks in the district and they had been able to mobilise Rs. 46·02 crores. This was remarkable for a small territory of 3,701·34 square kilometres comprising population of 6.27 lakhs.

The following table reveals the banking statistics in the district from 1962 to 1968[1] :—

[1] Various issues of Statistical Tables relating to Banks in India.

TABLE No. 1.—STATISTICS OF BANKING BUSINESS IN THE GOA DISTRICT.

Year		Deposit (Rs. lakhs)	Advances (Rs. lakhs)	Branches (No.)	Centres (No.)	Per Capita Deposit (Rs.)	Per Capita Advances (Rs.)	Credit deposit ratio (%)
1962	..	12,87	1,03	9	7	205	16	8
1963	..	19,97	2,51	20	10	318	40	13
1964	..	24,44	5,58	24	10	392	89	23
1965	..	29,96	8,68	28	12	481	139	29
1966	..	33,60	10,82	35	14	518	163	32
1967	..	39,83	14,53	44	18	596	217	36
1968	..	46,02	16,48	60	33	682	244	36

During the last 10 years, bank deposits have increased from Rs. 14·16 crores to Rs. 55 crores representing a growth of 286·2 per cent per capita. Deposit in Banks in the district worked out to over Rs. 700·00 in 1971. In 1968 it was Rs. 579·00 against all India per capita deposits of Rs. 82·00. The following table gives the deposits owned by two joint-stock banks in the district of Goa for the year 1970.

TABLE No. 2.—DEPOSITS OWNED BY TWO JOINT STOCK BANKS IN THE DISTRICT OF GOA FOR THE YEAR 1970.

(Amount in'000 Rs.)

Deposits		Fixed Deposits		Current Accounts Deposits	
		No. of Accounts	Amount	No. of Accounts	Amount
Manufacturing Concerns	..	..	..	10	29
Trading Concerns	..	1	17	208	2,04
Personal	.. ..	3,432	1,07,67	62	1,02
Banking Companies	..	2	13,00	1	8
Business	.. ..	7	60	163	2,03
Public Institutions and Trusts	..	19	3,51	1	1
Others	.. ..	70	4,93	21	19
Total	.	3,531	1,29,88	466	5,66

(Amount in'000 Rs.)

		Saving Deposits		Other Deposits		Total Deposits	
		No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
Manufacturing Concerns	..	..	..	1	77	11	1,06
Trading Concerns		..	..	..	..	209	2,21
Personal	.. ..	10,581	68,09	539	12,05	14,614	1,88,83
Banking Companies		..	..	..	..	3	13,08
Business	.. ..	7	1	4	3	181	2,67
Public Institutions and Trusts	..	98	1,11	..	..	118	4,63
Others	.. ..	81	2,25	7	6	179	743
Total	..	10,767	71,46	551	12,91	15,315	2,19,91

The securities against which advances are made by the banks are of various types. The following table gives the securitywise analysis of advances of two banks in the district in the year 1971.

TABLE No. 3.—ANALYSIS OF ADVANCES OF JOINT STOCK BANKS (ACCORDING TO SECURITY), GOA DSITRICT.

(Amount in '000 Rs.)

Security	Amount in 1970	Amount in 1971
1. Food articles ...	13	7
2. Industrial Raw Material ...	33	241
3. Plantation Products ...	309	801
4. Manufactures and Minerals ...	43,645	57,044
5. Other Securities ...	17,407	26,072
Total Secured Advances ...	61,407	84,165

The following table reveals an analysis of advances of two joint stock banks according to purpose in the years 1970 and 1971.

TABLE No. 4.—ANALYSIS OF ADVANCES CF JOINT STOCK BANKS (ACCORDING TO PURPOSE), GOA DISTRICT.

(Amount in '000 Rs.)

Purpose	Amount in 1970	Amount in 1971
1. Industry ...	54,228	56,402
2. Commerce ...	7,707	8,555
3. Agriculture ...	1,074	1,178
4. Personal ...	2,095	2,164
5. All others ...	1,529	1,645
Total ...	66,633	69,944

All the aforesaid banks are providing the usual banking facilities to the public including the financing of trade and agriculture and of storage and movement of agricultural produce. The Co-operative Banks and a large number of Co-operative Credit Societies operating in the district are catering to the needs of the agriculturist and the general public. Soon after liberation, a number of branch bank offices were opened in the district, a mention of which has already been made. This phenomenal expansion in the network of the branches has been possible due to very high deposits available in the district.

CO-OPERATIVE MOVEMENT

Throughout the period of foreign domination by the Portuguese for about 450 years, the territory could never gather economic progress by establishing different industrial units and by making more and more avenues of employment available to the people. Agriculture which was the main occupation of the people of the territory was also concentrated in a few hands while the actual cultivators always remained serfs of the *bhatkars*. After the liberation of the territory, it was thought prudent to encourage the people to form co-operatives so as to ameliorate economic conditions of the weaker sections of the society. The co-operative movement in the district started with the establishment of the first co-operative society on November 17, 1962. The co-operative department was also set up about the same time.

Prior to setting up the Co-operative department in November 1962, a team of experts of the Government of India and the Reserve Bank of India was invited to suggest ways and means of introducing the co-operative system in the territory. The Union Territory adopted the Maharashtra Co-operative Society's Act, 1960, with certain modifications, and the rules thereunder were framed.

Since the establishment of the first co-operative unit in the district, a number of co-operative societies of different categories have come to be established. The following table gives the number of various types of co-operative societies registered in the district of Goa from 1962-63 to 1970-71. At present almost the entire rural area has been brought under the co-operative fold.

TABLE No. 5.—Co-operatives Societies in the District of Goa.

Serial No	Type of Co-operative Societies	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
1	Apex Co-operative Bank		1	.	.	.	..	..	..	..
2	Service	38	116	9	4	1	2	2	..	.
3	Dairy	.	4	12	4	11	5	13	2	10
4	Fishery	3	1	3	1		.	1	.	1
5	Poultry		.	4		..		..	.	..
6	Farming	..	1	1	.	.	2	.	.	2
7	Marketing		..	..	5	1	..	..	.	..
8	Consumers	6	16	13	10	7		..	3	2
9	Transport	.	4	2	1	1	..	..	.	..
10	Housing	1	.	2	..	1	2	1	10	6
11	Industrial	3	9	3	2	..	2	1	..	..
12	Urban Credit		1	7	2	3	2	2		2
13	Urban Bank	..	1	..	1	..	..	.	..	..
14	Industrial Estate	3	1		..	..	..	..	..	..
15	Labour Contract	2	..	..	1	..	..	..	..	..
16	Toddy Tappers	..	..	1	..	..	..	..	..	..
	Total	56	155	57	31	25	15	20	15	23

Since co-operation was adopted as a measure to achieve economic progress, co-operatives such as the State Co-operative Bank, Urban Banks, Urban Credit Societies, Service Societies, Marketing Societies, Fishery Societies, Poultry Societies, Farming Societies, Housing Societies, Industrial Co-operative, Dairy Societies, Transport Societies, Processing Societies and Consumer Co-operatives have come to be established.

By the end of June 1971, there were in the district, 357 co-operative societies registered with 91,019 members and a capital of Rs. 92,77000·00. The following table shows the progress in co-operative societies from 1966-67 to 1970-71.

TABLE No. 6.—PROGRESS IN CO-OPERATIVE SOCIETIES

ITEM	Year (a)				
	1966-67	1967-68	1968-69	1969-70	1970-71
1	2	3	4	5	6
1. No. of Societies ..	343	351	369	371	381
2. No. of members ..	87,944	91,895	94,902	97,421	99,340
3. Total working capital (Rs. in thousands) ..	21,112	26,339	32,756	39,358	60,694
4. Loans advanced to members (Rs. in thousands) ..	5,296	25,107	26,408	25,029	22,105

(*a*) Co-operative year.

Blockwise information on Service Co-operative Societies as on 30th June 1971 is given under Appendix 11.

Co-operative Banks

In the co-operative field in the district, three banks have been established with headquarters at Panaji. The branches of the Goa State Co-operative Bank Limited, are located at Ponda, Margao, Mapusa, Vasco-da-Gama, Pernem, Sanquelim, Curchorem and Canacona. The Caixa de Providencia de Nova Goa which was carrying on insurance business on a co-operative basis was converted into the Goa Urban Co-operative Bank Limited, during 1964-65, as the Life Insurance Corporation of India Act, was made applicable to the Union Territory of Goa, Daman and Diu. then. This bank has branches at Panaji, Margao, Ponda and Curchorem. The Women's Co-operative Bank with its head office at Panaji has been operating in the district since May, 1973.

The details regarding these banks is given below.

The Goa State Co-operative Bank Limited.—The Goa State Co-operative Bank Limited registered on 7th November 1973, is the apex co-operative bank functioning at Panaji, the first of its kind in the co-operative sector. The main aim of the bank is to finance the different types of societies in tee Union Territory of Goa, Daman and Diu, with special stress on the agricultural development of the district. The first branch of the bank was opened at Panaji on the 2nd February 1964. The bank meets the requirements of short term and medium term loans of service co-operatives, as also loan needs of its affiliated members. In the absence of a land development bank in the Union Territory of Goa, Daman and Diu the Goa State Co-operative Bank Limited, makes available long term agricultural loans to agriculturists. Similarly, there being no independent housing financing society in the district, the bank also fulfils long term housing needs.

The following table gives the position of various types of loans sanctioned by the bank.

TABLE No. 7.—TYPES OF LOANS SANCTIONED BY THE GOA STATE CO-OPERATIVE BANK LIMITED DURING 1969-70

(Amount in lakh rupees)

Type of Loan	Amount Sanctioned	Amount r Dissbed	Amount Out-standing	Overdues
1. Short Term (Agriculture) ..	27.72	14.67	13.49	3.68
2. Medium Term (Agriculture) ..	0.52	0.52	2.28	1.05
3. Medium Term (Non-Agriculture)	6.21	4.34	14.01	1.25
4. Hypothecation Cash Credit ..	22.00	22.00	9.15	0.24
5. Clean Cash Credit ..	16.55	16.55	7.19	0.04
6. Pledge	0.56	0.56	0.37	....
7. Short Term Agriculture Loan (Direct Finance)	0.31	0.31	0.31	....
8. Long Term Loan ..	1.07	1.07	1.31	....
9. Individual Overdraft ..	5.53	5.53	2.96	....
10. Loan against deposit ..	0.55	0.55	0.55	....
11. Inland Bills Purchased ..	1.27	1.27	1.27	....

The Goa Urban Co-operative Bank.—This institution was in existence even before Liberation by name, 'Caixa de Providencia de Nova Goa', carrying on insurance business on co-operative lines. This

institution was converted into a bank *viz.* the Goa Urban Co-operative Bank in the year 1964-65 with the extension of Life Insurance Corporation of India Act, to the Union Territory of Goa, Daman and Diu. At the time of conversion its total deposits were of Rs. 18 lakhs. Thereafter its branches spread over in the district. The main aim of the bank is to meet the loan needs of small traders/merchants/industrialists and town dwellers. The first branch of the bank was registered on 7th October, 1963.

Women's Co-operative Bank Limited.—The Women's Co-operative Bank Limited, the first of its kind in the district was started with a view to tendering banking facilities to women entrepreneurs. Though it was registered on December 21, 1972, with a share capital of Rs. 22,750·00, it started its regular functioning only in May 1973. It is established on co-operative lines with the objectives of helping economically handicapped women, encouraging self-reliance, thrift, savings, co-operation among women, advancing loans to its members at moderate rates of interest and assisting women to employ themselves gainfully. The membership of the bank is restricted to women and women's institutions in the district of Goa. Its office is located at Panaji, Goa.

Table No. 8 reveals the ownership of deposits of one of the co-operative banks in 1969-70.

Credit Co-operatives

To provide credit facilities to the weaker sections of the society who were not in a position to pledge anything with the commercial banks from which it was difficult to obtain loans, different types of credit co-operatives came to be established in the district.

By the end of June 1971, there existed in the district 19 salary earners' credit co-operatives and two urban co-operative banks. These societies create their own funds by raising deposits and share capital from members, etc.

The first salary earners' credit co-operative society was registered at Valpoi on February 20, 1964, and was known as the Satari Taluka Sahakari *Shikshak Sahakari Path Society Limited.* These 19 societies had a membership of 3,007 and a share capital of Rs. 2,86,000·00 by the end of January 1971.

Service Co-operatives

The Service Co-operatives have been established with a view to rendering agricultural services, such as providing loans for raising agricultural crops, supply of better seeds, implements, manures, fertilizers, insecticides, fungicides, etc. The first service co-opertive society in the district was established at Nagargaon, Satari taluka, on

TABLE No. 8.—OWNERSHIP OF DEPOSITS OF CO-OPERATIVE BANK

(Amount in '000 Rs.)

	Fixed deposits		Current Accounts deposits		Savings deposits		Other deposits		Total deposits	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
		Rs.		Rs.		Rs.		Rs.		Rs.
1. Manufacturing Concerns ..	..	..	..	..	..	..	..	..	..	..
2. Trading Concerns ..	..	..	312	279	..	..	..	..	312	279
3. Personal ..	748	3,944	..	..	4,230	2,286	560	298	5,538	6,528
4. Banking Companies ..	..	..	..	..	..	..	..	..	..	..
5. Business ..	..	..	..	..	..	..	..	..	..	..
6. Public Institutions and Trusts	..	..	..	..	..	..	..	..	..	..
7. Others ..	52	778	..	..	62	120	.		114	898
Total ..	800	4,722	312	279	4,292	2,406	560	298	5,964	7,705

March 4, 1963, and is known as the Nagargaon Group Vividha Karyakari Sahakari Sevak Society Limited. Most of the service co-operatives came to be established in the year 1963-64. All the villages in the district have been covered by 160 service co-operatives. The total membership and share capital of these service co-operatives on January 30, 1971, stood at 57,064 and Rs. 15,77,000·00 respectively, the Government contribution being to the extent of Rs. 7,37,000·00. Though these societies were established as service co-operatives, they also undertook distribution of controlled commodities such as rice, wheat, sugar, etc. During the year 1970-71, these societies sold goods worth Rs. 1,33,44,000·00.

The following table gives statistics regarding service co-operatives in the district from 1962-63 to 1969-70.

TABLE No. 9.—STATISTICS ON SERVICE CO-OPERATIVES IN THE DISTRICT OF GOA

(Amount in '000 Rs.)

Year	Coverage of villages and population				Capital		Agricultural Loan	
	No. of societies	Villages covered	No. of members	Population covered	Members	Government	No. of societies	Loan advanced
1	2	3	4	5	6	7	8	9
1962-63	38	38	3,101	....	49	..	..	..
1963-64	154	239	27,406	1,37,030	406	..	..	155
1964-65	163	257	52,061	2,50,050	700	316	76	650
1965-66	167	257	54,461	2,72,305	780	535	73	769
1966-67	168	257	56,828	2,84,140	838	619	97	651
1967-68	169	257	59,024	2,95,120	884	660	78	839
1968-69	171	256	59,396	2,96,980	925	665	88	1,106
1969-70	165	256	58,117	2,90,585	920	687	98	1,347

Year	operation		Business operation				Profit		Loss	
	Loans outstanding	Over dues	No. of societies	Sale of Agricultural requisite	No. of societies	Sale of consumer goods	No of societies	Amount	No. of societies	Amount
1	10	11	12	13	14	15	16	17	18	19
1962-63	..		..	.		..		.	.	..
1963-64	..	..	..	145		2,288	.	..	..	..
1964-65	..	..	150	768	166	14,024	130	230	34	20
1965-66	597	263	153	1,028	160	25,603	90	136	72	108
1966-67	783	386	144	1,170	151	27,527	101	227	67	63
1967-68	1,119	465	128	1,709	149	25,026	109	197	60	81
1968-69	1,436	684	117	2,023	142	23,466	53	83	118	305
1969-70	1,791	869	107	1,569	132	18,312	64	85	98	114

Marketing Co-operatives

The agriculturists in the country, Goans being no exception, have always suffered at the hands of middle men and wholesalers and were particularly forced to sell their goods at low rates while middle men and

wholesalers accrued high profits, which also resulted in increasing price levels, without agriculturists getting their due share. With a view to securing a better return for the agricultural produce and for ensuring supply of quality goods to the consumer at reasonable rates, marketing co-operative societies were established. By the end of June 1971, there were in the district, six marketing co-operatives. These societies had a memgership of 1429 and a share capital of Rs. 1,18,000·00. During the year 1970-71, the Central Supari Sahakari Kharedi-Vikri Society Limited, and the Satari Taluka Sahakari-Vikri Society, Limited, Valpoi, effected sales to the order of Rs. 19,26,000·00.

Fishery Co-operatives

Fishery was hardly developed on an industrial basis before liberation, and the age-old system of fishing prevented the industry from flourishing. The need was felt for capital and other equipment, to promote the industry and it was found essential that the fishermen should unite and solve their difficulties on a co-operative basis. The main objective of fishery co-operatives is to provide loans, fishing requisites, boats, etc. to fishermen with a view to augmenting their fish catch as well as arranging its processing and marketing. This in turn would improve the economic conditions of the fisherfolk. The first fishery co-operative society was registered at Canacona on March 2, 1963, and is known as the Kankon Bhag Machimary Sahakari Society Limited. By the end of June 1971, there were in the district, nine fishery co-operatives with a membership of 1,904 and a share capital of Rs. 62,000·00. The Goa District Co-operative Fisheries Federation has also been established recently with a view to strengthening and streamlining these fishery co-operatives. The Federation has specifically been formemd to undertake the following integrated schemes :—

(1) To increase the fish production by introducing improved methods of fishing ;

(2) To link fish production with storage to needy fishermen who desire to operate boats ;

(3) To undertake export of prawns and fish products ;

(4) To make available loans to needy fishermen who desire to operate boats ;

(5) To provide servicing facilities and supply spare parts to mechanised boats ;

(6) To provide fishing requisites to boat operators through primary fishery societies ;

(7) To strengthen the primary co-operatives in the long run and to organise more primary societies through which the objectives can be achieved and implemented after strong integrated base is built up.

The following table gives details regarding fishery co-operatives in the district from 1963-64 to 1970-71 :—

TABLE No. 10.—OPERATIONS OF FISHERY CO-OPERATIVES IN GOA DISTRICT.

(Amount in '000 Rs.)

Year	No. of societies	No. of members	Share capital		Working capital	Loans		Sales	Profit	Loss
			Members	Government		Advance	Out-standing			
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1963-64 ..	4	642	12	5	8	22	..	9	..	..
1964-65 ..	7	1,304	24	12	37	76	..	134	4	13
1965-66 ..	8	1,615	30	15	193	7	..	302	12	12
1966-67 ..	8	1,647	30	22	383	2	10	141	11	13
1967-68 ..	8	1,626	30	18	162	..	8	..	5	21
1968-69 ..	9	1766	10	17	129	3	17	42	2	7
1969-70 ..	9	1,756	31	17	150	..	7	12	4	1
1970-71 ..	9	1,904	39	23	234	..	6	21	6	24

Poultry Co-operatives

It has always been essential to find subsidiary occupations for agriculturists particularly after the harvest season. With this in mind, two poultry co-operative societies were formed in the district by the end of June 1971. These societies had a membership of 325 and a share capital of Rs. 19,000·00.

Farming Co-operatives

The problem of small and uneconomic holdings of agriculturists resulted in the downfall of agricultural products and as such it was felt necessary that farming co-operatives be established, though the problem is not so acute in the district of Goa. Two such co-operatives were functioning in the district by the end of June 1971. These co-operatives had a membership of 54 and a share capital of Rs. 9,000·00.

Housing Co-operatives

The problem of acute shortage of residential accommodation is always felt in major cities and towns and particularly, developing ones with Goa being no exception. As the rents charged for accommodation are particularly high, it is very difficult for the common man to have suitable residential accommodation at a reasonable rate. The solution to this problem was found in co-operative housing societies. The main objective of these societies is to provide tenements to its members for residential purposes. The first housing co-operative was registered at Margao on June 11, 1963 and is known as the Margao Housing Co-operative Society Limited. By the end of June 1971, there were 21 housing co-operatives with a membership of 565 and

a share capital of Rs. 6,86,000·00. Of these, four housing co-operatives have already completed their projects. The financial needs of these societies are met by the Goa State Co-operative Bank Limited, Panaji, to which a housing loan of Rs. 6,00,000·00 for the purpose has been made available by the Government.

Industrial Co-operatives

The development of industries was thoroughly neglected by the Portuguese. Whatever industrial development the district has achieved is the product of Liberation. To boost industrial development in the district, the co-operatives of persons who have traditional skill and craftsmanship such as weavers, potters leather workers, carpenters, salt workers, etc. were formed. The first industrial co-operative society known as the *Gomantak Manila Audyogik Utpadak Sanstha Limited* was registered at Verem on May 21, 1963. By the end of January 1971, there were in the district, 20 such societies with a membership of 1,052 and a share capital of Rs. 4,54,000·00.

The following table gives detail statistical information in respect of these societies from 1965 to 1971.

TABLE No. 11.—STATISTICS ON INDUSTRIAL CO-OPERATIVES IN GOA DISTRICT

(Amount in '000 Rs.)

Year	No. of societies	No. of members	Share capital		Working Capital	Sales	Profit	Loss
			Members	Gov'.				
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1965 ..	20	1,037	456	371	182	254	41	52
1966 ..	25	2,695	501	391	288	319	24	21
1967 ..	23	2,643	416	534	651	306	30	61
1968 ..	23	1,494	406	308	862	295	30	..
1969 ..	23	1,711	403	310	993	250	28	70
1970 .	21	1,079	273	184	634	83	3	5
1971 ..	20	1,052	270	184	676	105	11	..

Dairy Co-operatives

Like other parts of the country, the economy of the district of Goa is also primarily an agricultural economy. The agriculturist had no subsidiary occupation prior to Liberation. People had no taste for milk consumption and whatever demand for milk there was, was met by imported varieties. It was only after Liberation that attempts were made by the Administration to promote consumption of fresh milk and to boost local production. The Government milk scheme was started from September 1, 1964 and as a natural corollary, dairy co-operatives

were formed for the supply of milk to Government Milk Scheme. By the end of January 1971, there were in the district, 55 dairy co-operatives with a membership of 2,434 and a share capital of Rs. 4,13,000·00, including Government contribution towards share capital of Rs. 1,74,000·00. Of the 55 dairy co-operatives, 39 societies supply about 12,62,000 litres of milk per annum to the Government Milk Scheme.

The following table gives details regarding membership, share capital and business operation of these societies from 1964 to 1971.

TABLE No. 12.—OPERATION OF DAIRY CO-OPERATIVES IN GOA DISTRICT.

(Amount in '000 Rs.)

Year	No. of societies	No. of members	Share capital		Loan operations	
			Government Rs.	Members Rs.	Advanced Rs.	Outstanding Rs.
1964 ..	4	105	..	9	16	16
1965 ..	16	629	..	41	182	149
1966 ..	20	949	24	63	226	279
1967 ..	31	1,105	40	85	234	396
1968 ..	35	1,289	71	107	255	536
1969 ..	48	1,815	117	163	520	906
1970 ..	47	1,986	147	186	593	1,015
1971 ..	55	2,434	174	239	766	1,426

Year	Overdues Rs.	Milk supply		Profit		Loss	
		No. of societies	No. of litres	No. of societies	Amount Rs.	No. of societies	Amount Rs.
1964 ..	2	3	4	..	..	3	2
1965 ..	11	11	224	3	1	13	27
1966 ..	13	23	499	10	13	9	7
1967 ..	48	25	711	15	9	15	6
1968 ..	107	27	537	22	18	11	4
1969 ..	315	30	720	19	31	29	18
1970 ..	447	33	1,100	27	39	20	12
1971 ..	527	39	1,262	28	51	27	13

Transport Co-operatives

The first transport co-operative society in the district was registered at Panaji on August 9, 1963. By the end of June 1970, there were in the district 7 transport co-operatives with a membership of 1,383 and a share capital of Rs. 3,25,000·00. Of these societies, 3 run petrol pumps and 2 are engaged in plying buses within and without Goa.

Consumer Co-operatives

The main objective of consumer co-operatives is to supply consumer goods to their members as well as to the public at large at reasonable rates, and to keep prices of consumer goods at the minimum possible level by eliminating middle men. These societies came to be established particularly when the inflationary trends were seen in the Indian economy during the middle of the current century as it was found that the price rise was mainly due to the existence of an unnecessary number of middle men between the producer and the consumer and the tendency of these middle men to satisfy their greed for higher profit margins. The only way thought prudent to do away with these middle men and to give justice to the producer as also to the consumer was to estabish consumer co-operative societies. The first consumer co-operative store in the district of Goa, was established at Vasco-da-Gama on 20th March 1963 and was known as Chowgule Staff Consumers' Co-operative Society Limited. By the end of January 1971, there were in the district, 52 consumer co-operatives. The typewise break-up of these consumer co-operatives was as under :

Wholesale co-operative Store ...	... 1
Urban Co-operative Societies ...	... 12
Employees' Co-operative Societies ...	... 31
Students' Co-operative Societies ...	... 8

The membership and the share capital of these co-operative societies stood at 13,994 and Rs. 5,64,000·00 respectively, as on January 30, 1971. The total turnover of these societies during the year 1970-71 came to Rs. 1,97,07,000·00.

Consumer co-operatives have been established in the mining areas particularly. However, it may be stated here that most of these consumer co-operatives have concentrated on distribution of controlled commodities. Attempts are being made to persuade these societies to undertake the work of distribution of other essential consumer goods as well. The financial needs of these consumer co-operative societies are met by the Goa State Co-operative Bank Limited, with headquarters at Panaji. The employers also contribute towards the financial needs of the employees' co-operative movement.

The following table gives statistics regarding consumer co-operative societies in the district of Goa as on January 30, 1971.

TABLE No. 13.—CONSUMER CO-OPERATIVE SOCIETIES IN THE DISTRICT OF GOA AS ON JANUARY 30, 1971.

(Amount in '000 Rs.)

Year	No. of societies	No. of members	Share Capital		Total
			Government	Members	
1	2	3	4	5	6
			Rs.	Rs.	Rs.
1965-66 ..	43	10,404	115	281	396
1966-67 ..	49	11,666	126	304	430
1967-68 ..	48	12,443	172	324	496
1968-69 ..	48	12,978	171	318	489
1969-70 ..	51	13,651	184	347	531
1970-71 ..	52	13,988	208	356	565

(Amount in'000 Rs.)

	Business operations		Profit		Loss		Stagnant
	Purchases	Sales	No. of societies	Amount	No. of societies	Amount	
1	7	8	9	10	11	12	13
	Rs.	Rs.		Rs.		Rs.	
1965-66 ..	11,824	12,014	29	96	12	48	2
1966-67 ..	17,038	17,670	33	115	13	43	3
1967-68 ..	18,604	19,515	33	123	14	93	1
1968-69 ..	22,140	22,643	30	114	18	21	5
1969-70 ..	23,833	24,861	34	194	16	24	7
1970-71 ..	19,978	19,707	42	138	10	30	5

SMALL SAVINGS

Introduction

Regular small savings movement started in India in 1943 with a view to promoting and fostering thrift among the people as also to channelise the savings. The scheme was subsequently introduced in the

district of Goa after Liberation. Today the small savings scheme is reckoned to be an earnest effort to make the common man save. The scheme also aims to form pay roll savings groups in places of work such as offices, factories, industrial establishment, etc. of small savers whose savings are deducted at source and are remitted by the employer to the post office. The scheme is considered as an instrument for canvassing rural as well as urban savings. The scheme was introduced to bring back to the Government additional money that has gone to the people as a result of deficit financing to curb the inflationary trends.

Post Office Savings Banks

The principal saving agency of the National Savings Movement is the Post Office. The wide-spread organisation of Post and Telegraphs enables the savings movement to reach far-flung rural areas in which banking is yet to develop. It has been considered as an important source for mobilising the savings of people of small means. In the district of Goa, there are 144 post offices including sub-post offices and branch post offices doing the savings bank work as on 11th October, 1972. The district is divided into two sub-divisions with head offices at Panaji and Margao. A sum of approximately Rs. 2 crores has been mobilised by the National Savings Organisation in the form of postal savings and National Savings Certificates.

The following statement gives the number of accounts and the total amount deposited in Post Office Savings Bank at Panaji and Margao head offices from 1969-70 to 1971-72.

	1969-70		1970-71		1971-72	
	No of accounts	Amount Rs.	No of accts	Amount Rs.	No. of accts.	Amount Rs.
Panaji Savings Bank	11 903	26,73,766·12	12,405	36,00,448·24	12,608	23,70,494·54
Margao Savings Bank	9,569	45,66,361 57	9,863	48,71,846·.8	10,403	49,19,654·51

Besides the Savings Banks, the post offices play a vital role in inculcating among the general public, maximum propensity to save by introducing various other small savings schemes such as National Savings Certificates, National Defence Certificates, National Plan Savings Certificates, Cumulative Time Deposits, etc.

The tables revealing the total outstanding investments in the National Savings Certificates of different maturities since the Savings Scheme was started in the district and the corresponding amount discharged from Panaji and Margao head offices as well as the total outstanding investments in the Cumulative Time Deposits, Time Deposits, Recurring Deposits, Fixed Deposits and Compulsory

Deposits Scheme in Panaji and Margao Head Offices are given under Appendix 12.

Sanchayikas

The National Savings Organisation launched a new Savings Plan for school children during the year 1971-72 called *Sanchayika* (School Savings Bank). The idea behind this scheme is not only to inculcate amongst the school children the habit of thrift, but also to give them training in the management of monetary affairs and banking. The children run their own banks, serving in different capacities such as Bank Managers, counter-clerks etc. Under the scheme, 14 schools were covered with a membership of 2,498 and the corresponding amount collected in this way was Rs. 18,000·00 in the district of Goa.

Public Provident Fund Scheme

The Public Provident Fund Scheme was made a part of small savings scheme during the year 1971-72. In the entire territory of Goa, Daman and Diu, 41 accounts were opened in 1970-71 and the corresponding amount deposited was Rs. 3,11,123·00 while during the year 1971-72 (upto January 1972) 10 accounts were opened for a sum of Rs. 1,77,622·00. However, since in this respect, the districts of Daman and Diu are small and insignificant, a fairly accurate idea can be had from these figures of the progress of the scheme made in the district of Goa.

INSURANCE

Prior to the liberation of the territory, there was very little development of Insurance business, though seven Insurance companies were registered in Goa. Three Portuguese companies were carrying out some insurance business till they ceased functioning in Goa in 1961.

As already referred earlier, the *Caixa de Providencia de Nova Goa* was carrying on the insurance business on co-operative lines in the district, before liberation.

The Life Insurance Corporation of India was established by the Government of India on September 1, 1956, after the passing of the Life Insurance Act of 1956 under which the business of Life Insurance in the country was nationalised. The Act also made the Life Insurance Corporation the sole agency for carrying out Life Insurance business in the whole of India. General insurance which includes fire, marine, accident and other insurance was, however, kept open to private enterprise. As a result, most of the former insurance companies and societies which used to transact all insurance business including life, then switched over entirely to general insurance.

General Insurance was also nationalised by the Government of India on 14th May 1971.

As per the new organisational and administrative set-up of the Life Insurance Corporation, the dstrict of Goa is placed under the territories jurisdiction of the Bombay Divisional Office of the Western Zone. There are branch offices located at Panaji and Margao and Developmental Centres at Mapusa and Vasco-da-Gama. At present 420 acting agents are engaged in canvasing the insurance business all over the district of Goa.

The development of insurance business in the district commenced mainly after liberation. The following table reveals the figures of Life Insurance Corporation business proposed and completed in Goa from the year 1962 to 1972:—

TABLE No. 14.—INSURANCE BUSINESS IN THE GOA DISTRICT

Year	Proposed		Completed	
	No. of Proposals	Sum proposed (Rs. in crores)	No. of Policies	Sum assured (Rs. in crores)
1962-63	2,737	1·43	2,451	1.28
1963-64 . ..	3,212	1·70	2,859	1.50
1964-65 . ..	3,323	1·88	3,027	1.70
1965-66	3,572	2·02	3,396	1.87
1966-67	3,490	2·16	3,313	2.01
1967-68	3,658	2·41	3,267	2.09
1968-69 .. .	3,569	2·45	3,435	2.40
1969-70	4,462	2·87	4,172	2.65
1970-71 .. .	5,202	3·85	4,587	3.37
1971-72	6,602	5·12	6,336	4.87

FINANCIAL ASSISTANCE

Maharashtra State Financial Corporation (MSFC)

The jurisdiction of the Maharashtra State Financial Corporation extends over the district of Goa. It provides financial assistance from Rs. 10,000·00 to Rs. 10,00,000·00 to proprietory concerns and private

companies and registered co-operative societies. The rate of interest charged is 9 per cent. It has a branch office at Panaji and a sub-office at Margao.

Goa, Daman and Diu Industrial Development Corporation

Established in the year 1966 with the main aim of securing and assisting the rapid and orderly development of industrial units, industrial areas and industrial estates of the Union Territory of Goa, Daman and Diu, the Corporation can acquire, hold and dispose of property for the development of industrial areas and estates. In the industrial estates, sheds are made available on rental basis (subsidised for five years) and also developed plots are given on lease basis to parties desiring to build their own sheds. It has established one industrial estate at Corlim and another estate at St. Jose de Areal. In both these estates developed plots are also available. These estates provide amenities like roads, water, power, bank, post office and canteen etc.[1]

Maharashtra Small Scale Industries Development Corporation

The jurisdiction of the Maharashtra Small Scale Industries Development Corporation extends over the Union Territory of Goa, Daman and Diu. An office of the Corporation includes procurement and distribution of scarce, indigenous and imported raw materials, import of raw materials against import licences issued to the small scale industrial units by clubbing them together, supply of machinery on hire purchase basis, participation in the Government Purchase programme on behalf of small scale industries and equity participation. The main activity of the Corporation centres round the distribution of scarce raw materials including ferrous and non-ferrous metals and chemicals.

Small Industries Service Institute

The Small Industries Service Institute is a Central Government Institution functioning for the purpose of imparting technical training in mechanics, techno-economic surveys, integrated plant studies and also training engineers and guiding the existing and prospective small scale entrepreneurs in starting, expanding, modernising and managing the small scale industries.

In order to give incentive to the small scale industries in the district they are exempted from sales tax, income tax, etc. and they have also been rendered subsidy to an extent of 15 per cent on fixed assets (land, building, plant and equipment) for establising new units in the district.

The table that follows reveals the managerial subsidy provided to industrial co-operatives, subsidy for purchase of improved type of

[1] For details see Chapter 5—Industries.

equipment by craftsmen and handicrafts industries, power subsidy to small scale industries and subsidy on rent of industrial sheds in industrial estates :

TABLE No 15.—MANAGERIAL SUBSIDY TO INDUSTRIAL CO-OPERATIVES

	1965-66		1966-67		1967-68		1968-69	
	No. of units	Amount Rs.	No. of units	Amount Rs.	No. of units	Amount Rs.	No. of units	Amount Rs.
Managerial subsidy to industrial co-operatives.	7	5,600	3	2,300	..	..	5	2,400
Subsidy for purchase of improved type of equipment by craftsmen and handicrafts industries.	.		..	..	.	..	..	..
Power subsidy to small scale industries.	..	..	.	..	.	..	47	11,696
Subsidy on rent of industrial sheds in Industrial Estates.	.	.	.			.	..	..

	1969-70		1970-71		1971-72		1972-73	
	No. of units	Amount Rs.	No of units	Amount Rs.	No. of units	Amount Rs.	No. of units	Amount Rs.
Managerial subsidy to industrial co-operatives.		..	4	1,920	6	1,770	..	..
Subsidy for purchase of improved type of equipment by craftsmen and handicrafts industries.	..		.	.	..	..	3	1,055
Power subsidy to small scale industries.	52	10,616	50	25,001	55	16,850	42	15,445
Subsidy on rent of industrial sheds in Industrial Estates	.		15	82,653	21	37,032	22	33,487

JOINT STOCK COMPANIES

By the end of March 1971, there were in the district, 108 Joint Stock Companies of which 14 were Public Limited Companies and 94 Private Limited Companies.

The first Public Limited Company by name M/s. Goa Textile Limited was registered with authorised and paid-up capital of Rs. 1,00,00,000·00 and Rs. 10,26,000·00 respectively. The total authorised capital of Public Limited Companies was Rs. 16,89,38,000·00. The paid-up capital of these Public Limited Companies was Rs. 5,78,22,000·00.

The number of Private Limited Companies in the district by the end of March 1971 stood at 94. Of these 27 were engaged in mining and quarrying, 17 in processing and manufacturing of chemicals and products thereof, 16 in transport, storage and communications and 9 in commerce, trade and finance. The remaining 25 were covered under fields of industrial activities. The first private limited company registered in the district was D. B. Bandodkar & Son Private Limited, with Rs. 10,00,000·00 as authorised capital and Rs. 5,100·00 as paid-up capital.

The total authorised capital of all these companies was Rs. 22,98,12,000·00 while the paid-up capital was Rs. 11,56,57,000·00.

The following table gives statistical information categorywise in respect of Public as well as Private Limited Companies.

TABLE No. 16—INDUSTRIAL CLASSIFICATION OF PUBLIC AS WELL AS PRIVATE LIMITED JOINT-STOCK COMPANIES WITH THEIR AUTHORISED AND PAID-UP CAPITAL AS ON 31ST MARCH, 1971.

Serial No.	Type of company engaged in industrial activity	Private Limited Joint-Stock Companies			Public Limited Joint-Stock Companies		
		No. of companies	Authorised capital (Rs. in '000)	Paid-up capital (Rs. in '000)	No. of companies	Authorised capital Rs. in '000	Paid-up capital Rs. in '000
1	Agriculture, Hunting, Forest and Fishing.	4	80,15	12,26	Nil	..	...
2	Mining and quarrying	27	6,88,10	4,86,79	Nil	...	....
3	Processing and Manufacture	6	54,00	18,63	6	5,88,00	97,55
4	Processing and Manufacture of chemicals and products thereof	17	4,98,50	2,06,39	3	2,38,33	80,21
5	Processing and Manufacture of products not elsewhere classified	8	55,67	24,07	1	1,50,00	45
6	Construction and utilities	3	85,00	20,00	Nil	..	..
7	Commerce and Trade and Finance	9	86,00	37,34	Nil	....	..
8	Transport, storage and communication.	16	6,85,60	3,39,05	4	7,13,05	4,00,01
9	Community and business service	3	60,10	9,04	Nil	...	
10	Personal and other services	1	5,00	3,00	Nil	..	....
	Total	94	22,98,12	11,56,57	14	16,89,38	5,78,22

On comparison between Public Limited Companies and Private Limited Companies, it is noticed that all 27 Companies engaged in mining and quarrying were Private Limited Companies. All the Companies engaged in commerce and trade were also registered as Private Limited Companies.

Extent of Employment

Trading activities offer avenues of employment to a considerable number of persons in the district of Goa. The Census of India 1961, reveals that there were 12,163 persons engaged in trade and commerce out of which 8,505 were males and 3,658 were females

As per the Census of 1971, 24,676 persons including 20,873 men and 3,803 women were engaged in trade and commerce in the district. Of these as many as 13,083 persons including 11,987 males and 1,096 females representing 53·02 per cent were engaged in urban areas while the remaining 11,593 persons including 8,886 males and 2,707 females representing 46·98 per cent were engaged in rural areas.

The following table gives the comparative table of number of persons engaged in trade and commerce, talukawise, according to the censuses of 1961 and 1971.

TABLE No. 17—EXTENT OF EMPLOYMENT IN TRADE AND COMMERCE IN GOA DISTRICT

Taluka	1961 Census			1971 Census			Difference Income(-) Decrease (—)			Percentage Increase(-) Decrease(—)		
	Males	Females	Total	Males	Fimales	Total	Males	Females	Total	Males	Females	Total
Tiswadi	1,611	703	2,314	3,589	623	4,212	-1,978	—80	—1,898	-122.8	-11.4	+82.0
Salcete	2,368	938	3,306	5,634	805	6,439	+3,266	—133	+3,133	+137.9	—14.2	+94a8
Bardez	1,558	1,031	2,589	3,196	926	4,122	+1,638	—105	-1,533	+1,533	—30.9	+59.2
Mormugao	865	343	1,208	3,005	449	3,454	-2,140	+106	+2,236	-247.4	+28.0	+185.1
Ponda	623	122	745	1,819	248	2,067	-1,196	—126	+1,322	+192.0	-103.3	—177.4
Bicholim	537	59	596	1,161	196	1,357	+624	—137	+761	116.2	—232.2	+127.7
Pernem	190	132	322	437	122	559	—247	—10	—237	+130.0	—7.6	—73.6
Quepem	275	51	326	795	119	914	—520	—68	+588	+189.1	-133.3	—180.4
Sanguem	233	9	242	663	77	740	—430	+68	+498	+184.5	—755.6	+205.8
Canacona	114	268	382	264	209	473	—150	—59	+91	+131.6	—22.0	+23.8
Satari	131	2	133	310	29	339	—179	+27	+206	+136.6	+1,350.0	+154.9

TRADE

Goa has been a main trade centre from the distant past. The soil in Goa is fertile, producing rich agricultural crops such as cashewnut, arecanut, etc. Rich manganese and iron ore are situated in its vicinity contributing to the wealth of the district to a great extent. As a trade centre, the district has an historical background as well. The district enjoys numerous transport facilities. Rail, road and waterways run in almost all directions connecting Goa with important cities and towns in the country. The district is connected with Bombay by air services too.

IMPORTS

The principal countries of imports were United Kingdom, East and West Europe and Japan. The following figures reveal the centres of imports, their quantity and value:

(a) *Centres from where Imports are made*

	1969-70 (Amt. in lakhs) Rs.
United Kingdom and West Europe	138·31
East Europe	144·30
Japan	3·77
Other Countries	168·22
Grand Total	454·60

(b) *Type of Imports*

	1970-71 (Amt. in lakhs) Rs.
1. Bitumen	1,447
2. Fertilizers	96,889
3. Foodgrains and Pulses	18,412
4. General cargo	1,990
5. Lubricants	2,047
6. Mineral Oils	2,32,349

(c) *Value of Imports*

	(Amt. in million) Rs.
1963-64	27·8
1964-65	33·5
1965-66	54·4
1966-67	124·4
1967-68	65·7
1968-69	204·8
1969-70	45·5

EXPORTS

Some of the articles exported are produced and disposed off privately while others are displayed for sale at the weekly and annual fairs held at various places. J. N. da Fonseca in his book, "An Archaeological and Historical Sketch of the City of Goa (1878)" states that the principal exports are coconut, betelnut, mango, water-melon, jack and other fruits, cinnamon, pepper, salt fish, gum, coir-work, firewood, fowls and salt and that the exports amounted to £90,354-6-6 in the year 1874-75.

The following statement[1] reveals the figures of commodities exported in the year 1907, 1927 and 1928 :—

(Numbers in thousands)

Name of the commodity	1907	1927	1928
Coconuts	33,088	42,320	33,666
Price (in rupees)	1,580	1,598	1,639
Salt — Maund	749*	315	325
Salt — Price (in rupees).	159	313	322
Mangoes	9,041	9,545	11,371
Price (in rupees)	160	373	580
Arecanuts (per hundred)	10	24	33
Price (in rupees)	80	292	387
Fish (per hundred	30	49	30
Price (in rupees)	110	406	352
Cashew (per hundred)	27	27	33
Price (in rupees)	118	264	294

* The salt exported in 1907 includes the cumulated salt, hence the number of maunds has been increased.

Goa has a great potential for export on account of its mineral wealth and fine harbour. The exports from Mormugao Port mainly of metallic ores, have increased from 5·4 million tonnes to 7·59 million tonnes between 1962 and 1968. The foreign exchange earned by the district in 1968 was Rs. 33 crores. The district accounted for nearly 50 per cent of ore exported from the country. Other exports at present from the district include cashewnut, canned and sea food totalling Rs. 15·8 million (1966).

1. Sanvordenkar, *Gomantak parichaya*, Chapter V, p. 24.

The following statement gives the destination of exports and the quantity and value exported from the district :—

(a) *Destination of export*

	1969-70 (Rs. in lakhs)
U.K. & W. Europe	351·70
E. Europe	695·97
Japan	3,020·15
Other countries	30·82
Grand Total ...	4,098·64

(b) *Quantity of exports*

	(Metric tonnes)
1. Iron ore excluding pellets	90,47,848
2. Iron ore pellets	4,96,410
3. Black iron ore	3,30,986
4. Ferro Manganese ore	3,51,149
5. Manganese ore	3,17,112
6. Bauxite	35,865
Total ores ...	1,05,79,370
7. Oil cakes	71,956
8. General cargo	512
Total Others ...	72,468
Total Exports ...	1,06,51,838

(c) *Value of exports*

Years	(Rs. in millions)
1963-64	174·1
1964-65	213·0
1965-66	245·6
1966-67	345·2
1967-68	373·5
1968-69	444·3
1969-70	409·9

It was in 1947 that manganese ore was first exported. A hundred tonnes of ore then fetched £ 300-0-0. In 1948, 4,800 tonnes of ore were exported and in 1949, 50,000 tonnes of iron ore valued at £ 85,000-0-0 were exported. The manganese ore export reached its peak in 1953 with a total export of 2,07,000 tonnes. Goa's export of iron ore rose from 38,86,209 metric tonnes in 1959 to 65,51,950 metric tonnes in 1960.

The following statement[1] reveals the pattern of export in 1960.

			Metric tonnes
1. Iron Ore	...	...	5,662,087
2. Ferro-Manganese Ore	...	...	124,150
3. Manganese Ore	...	...	33,666
4. Processed Cashew nuts	...	...	1,307
5. Fresh, salt and dry fish	...	...	343
6. Areca	...	...	298
7. Canned meat	...	...	16
8. Animal waste	...	...	31
9. Bamboo (number)	...	...	126,550

The following statement[2] reveals the position of export of Goan minerals from 1966 to 1969.

Year	Iron Ore (incl. fines) (Tonnes)	Pellets (Tonnes)	Manganese Ore (Tonnes)	Ferro-Manganese Ore (Tonnes)
1966	72,38,890		66,689	1,06,871
1967	59,93,312	2,34,303	11,310	77,410
1968	70,90,343	3,76,280	6,000	1,20,257
1969	61,55,014	4,45,405	15,000	1,93,284

REGULATED MARKETS

No attention was given to agricultural marketing by the Portuguese and like agriculture, it was a neglected subject throughout the pre-liberation period. It was only after liberation that steps were taken gradually towards regulation of buying and selling in the agricultural produce markets, considering its prime importance in the trade sector, and elimination of unfair practices in commercial transactions in agricultural produce.

Coconut, betelnut and cashewnut are the principal crops grown in the district having sizeable exportable surplus. Since the introduction of the economic blockade in 1956, the movement of coconut and betelnut to the markets in the Indian Union stopped, and the producers received throwaway prices for these commodities. Moreover, the village trade which remained predominant in the absence of the traditional assembling centres, continued exploiting the agricultural producers. The absence of organised wholesale assembling

[1] *Shah A. B., Goa: Problems of transition*, p. 49.
[2] *Springboard into the seventies*, Goa Chamber of Commerce and Industry, p. 24.

markets, defective weights and measures, inadequate market intelligence and absence of grading and standardization were the main drawbacks prevailing in the agricultural marketing in the district.

Unlike in other parts of the country, Goa does not possess wholesale assembling markets and hence village trades in agricultural commodities is predominant. With the establishment of the Goa Agricultural Produce Market Committee in Goa with its area of operation extending all over the district and with declaration of coconut, betelnut and cashewnut as regulated commodities, the agricultural produce assembling market in the district is covered under regulatory orbit. With a view to receiving fair returns to producers/sellers to develop modern regulated markets with all amenities; eliminating the loopholes in the agricultural marketing; discouraging village trade and introducing healthy market practices, the Market Regulation Scheme was undertaken by extending the Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963. Under the same Act, a single district pattern market committee entitled 'The Goa Agricultural Produce Market Committee' was constituted in June 1969 with its headquarters at Margao. Taking into consideration the local condition and economic viability the Committee has its area of operation all over the district and is entrusted with the responsibility of establishing the market yards on modern lines in various localities where the notified agricultural produce can conveniently be assembled. The Committee has established a main yard at Margao and two sub-yards at Ponda and Sanquelim. These markets are owned, controlled and managed by the Goa Agriculture Produce Market, Margao.

Market Practices

All business transactions are governed by the various provisions of the Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963. The sale and purchase transactions are supervised by the Market Committee which looks after the interest of the farmers. The Market Committee has to eliminate the malpractices in the sale and purchase operations. The general commission agents who serve as a link between the farmers and the traders sell the commodities on behalf of the farmers. They are entitled to a commission from the farmers and are licensed by the Market Committee. Agricultural produce is brought to their shops by the farmer, and the commodities are sold to the highest bidder among the traders. The traders are also licensed by the Market Committee and are classified into 'A' class, 'B' class and 'C' class traders. The following statement reveals the composition of the agricultural market and the number of licenses issued as on 30th September 1971.

Category of licence	*Number of licences*
Commission Agent	10
'A' class Trader	121
'B' class Trader	99
'C' class Trader	89
'C' class Processor	41
Assistant to Trader	43
TOTAL ...	403

For the present, in respect of coconuts and cashew-seed, village sale is predominant in the district. The cashew traders advance consumption loans to small producers in the rainy season and compel the producers to sell their produce to their respective traders, thus depriving them of competitive prices. In respect of coconuts, the commission agents and the village traders are the two intermediaries commanding trade effectively. They arrange for pooling, dehusking, transportation and despatch to up-country markets. At present, they follow 'private negotiations' as a method of sale and the hours of business may be said, in general, to be 8-30 a.m. to 1-00 p.m. and 3-30 p.m. to 8-00 p.m. in their established business premises. Cash payments are made on the delivery of produce and credit sale takes place occasionally. Village traders, commission agents, retailers/hawkers and sometimes producers are engaged in assembling of produce. In respect of cashew, itinerant merchants, factory owners and producers are engaged in assembling. Trucks, pick-ups, passenger buses, and bullock carts are the main means of transportation. Cost of transport varies according to distance, size of lot, availability of motorable roads and means of transport.

Commission is charged at the rate of Rs. 1·56 per Rs. 100·00 on coconut dealings and brokerage at the rate of 80 paise per 1,000 nuts receivable from the village trader. Previously there was a practice to receive ½ kg. betelnut per maund of 15 kgs. towards driage, and charges on loading and unloading are at the rate of 10 to 15 paise per day. Cess is levied by the Goa Agricultural Produce Market Committee at the rate of 35 paise per Rs. 100·00 worth of produce purchased, payable by first purchaser. For Marketing operations, the main sources of finance are own finance, banks, relatives and marketing co-operative societies. The rate of interest for loan provided by banks is 11 per cent at present while finance from other agencies is slightly higher. Marketing finance is of short term and is provided on personal security, mortgages, etc.

The present system of commercial grading prevalent in the district in respect of agricultural commodities is as follows :—

A. (1) Coconut (moist)	Wholesale	120 *bharti*
		180 *bharti*
	Retail	100 *bharti*
		120 *bharti*
		150 *bharti*
		180 *bharti*
(2) Coconut (dry)	Atak	
	Kitak	
	Shepe	
B. Betelnut :—	Supari—good betelnut khoka—weeviled, immature and damaged nut.	

Producers generally store cashew and betelnut in their own houses while the coconuts are stored in small *kachcha* structures in the gardens or adjacent to their houses. Traders are required to store betelnut and cashewnut in *pucca* structures to avoid touch of moisture. Coconuts are stored by traders in open spaces in the shade or in *pucca* or *kuchcha* structures. Cost of storage varies from place to place according to the cost of structure and rent of premises. There are no standard charges fixed towards cost of storage The system adopted for weighing is by weighing balance and the weighmen are employed by traders. The Unit of sale (wholesale) for coconut, betelnut and cashew are 1,000 nuts, 15 kg. and one quintal respectively.

The following are the annual average prices of agricultural commodities :—

(Price per thousand in Rs.)

Commodity	Year				
	1967	1968	1969	1970	1971
Coconut (120 *bharti*) ..	450 to 460	410 to 420	420 to 440	610 to 625	475 to 480
Coconut (*rashi*) ..	380 to 390	350 to 360	380 to 400	575 to 600	415 to 420
Betelnut (*supari*) ..	98	105	108	102	97
Betelnut khoka	66	72	70	64	62
Cashewnut	130 to 140	145 to 150	140 to 145	184	156

Prices are offered on the basis of grades. In respect of a large sale of coconuts, the prices differ according to the variety. Calangute

variety coconuts fetch the highest price followed by the Tiswadi variety. Benaulim variety coconut price is lower than the other two varieties because of the small size of the nuts. Daily prices of these commodities are collected and disseminated by broadcasting over All India Radio, Panaji, for the information of producers, traders and consumers. The Goa Agricultural Produce Market Committee, displays price boards of notified commodities at Ponda, Sanquelim and Margao where daily prices are recorded. Besides this, weekly price bulletins are issued to village *panchayats* for display on the notice board.

The Agricultural Produce Market Committee is formed under the Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963, as extended to the Union Territory of Goa, Daman and Diu. The Committee comprises the representatives of the farmers, traders and nominees of the Government and local bodies. The present body is a nominated body formed in June 1969 with fifteen members. In pursuance of its programme the committee purchased three sites at a cost of Rs. 3·29 lakhs and constructed two sub-yards involving an estimated cost of Rs 3·7 lakhs.

WHOLESALE TRADE CENTRES

There are a number of wholesale markets in the district. Coconut, cashewnut, betelnut, dry chillies, cocum, onion, mango, pineapple and other fruits are the important commercial items transacted at the various markets in the district. Panaji, Margao, Mapusa, Banastarim, Ponda, Pernem, Bicholim, Sanquelim, Curchorem, Sanguem and Valpoi are the main trading centres which are connected by road to all surrounding villages and the goods from neighbouring villages are assembled here for transactions.

The following are the various wholesale markets in the district and the names of the main commodities handled at each market :—

Market		Commodities transacted.
Panaji	... ...	Coconut, cashewnut, onion, mango.
Margao	... ...	Coconut, mango, dry chillies.
Mapusa	... ...	Coconut, cashewnut, banana, dry chillies, mango, onion.
Banastarim	... ...	Banana, pineapple, and other fruits.
Ponda	... ...	Betelnut, cashewnut, banana, cocum, pineapple.
Pernem	... ...	Cashewnut.
Bicholim	... ...	Cashewnut, betelnut, banana, coconut, cocum.

Market.	Commodities transacted.
Sanquelim ...	... Cashew, betelnut, banana, cocum.
Curchorem ...	... Cashwnut, betelnut, banana and cocum.
Sanguem ...	... Cashewnut, coconut, betelnut and banana.
Valpoi ...	... Cashew, betelnut, banana and cocum.

The assembling of agricultural commodities is done, in general, by the producers, village traders, commission agents, shop-keepers, wholesalers, itinerant merchants, etc. In respect of cashewnut, assembling is done by producer, village traders, shop-keeper, itinerant merchants, wholesalers and commission agents and the activities of distribution is done by producers and the traders. Betelnut is assembled by the producers, village traders, itinerant merchants and wholesalers. The agencies involved in the distribution of betelnut are traders, commission agents and brokers. Pineapple in Goa district is pooled by producers, factories, itinerant merchants and the distribution is done by traders. Banana is also brought in these market centres by producers, itinerant merchants and the distribution is done through wholesalers and retailers. Onion is assembled by the producers themselves and distribution agencies operating in the market for these commodities are producers and traders. Dry chillies are brought in the market by producers and traders and the same agencies are involved in the distribution. The assembling of coconuts in the markets is undertaken by village traders, hawkers and the distribution is done by traders, brokers and commission agents. Cocum is brought to the market by producers and village traders and is then distributed by traders. Mangoes are brought to the market by producers and wholesalers. The distribution is done by traders, exporters and hawkers. Pineapple is assembled by the producers and supplied to factories, traders and exporters. Cashew, after being processed, is sent to the Bombay markets for export. There are also regular despatches of cashew kernels to upcountry markets. Raw cashew is sent to factories outside the district i.e. Vengurla and Malvan. Betelnut is regularly despatched to upcountry markets like Belgaum, Allahabad. Lucknow, Bombay and Delhi. Coconut is exported to Belgaum, Bombay, Poona, Sangli, Kolhapur, etc. Cocum is sent to Bombay, Belgaum and Kolhapur. Pineapple and mangoes are despatched to Bombay. The commodities imported in the district from the neighbouring states consists of foodgrains, pulses, vegetables, fruit, jaggery, sugar, oil, etc.

The producers of cashew seeds are bound to dispose their produce before the onset of the monsoon and thereby they are deprived of competitive prices. The main reasons for such compelled disposals are that the cashew processing factories who are the sole buyer of raw seeds offer lower prices in the rainy season on the plea that the produce get touch of moisture which reduces the durability. The long storage of betelnut without treating it with insecticides leads to deterioration in quality. Hence fumigation from time to time at assembling points is very essential. Suitable fumigation chambers are required to be provided in the betelnut assembling markets. There is no acute bottleneck in transportation in the talukas of Bardez, Tiswadi, Salcete and Mormugao. As regards other regions like Bicholim, Pernem, Satari and Canacona the roads linking producing centres to assembling markets are inadequate.

TRADE ROUTES

The agricultural commodities such as coconut, betelnut, raw cashewnut kernels, cocum which are exported are routed mostly by roads and the main routes are Goa-Belgaum and Goa-Sawantwadi. Some consignments of pineapple and mangoes are despatched by sea route i.e. Goa-Bombay.

The coconuts are transported by road to Belgaum, Bombay and Pune markets. The freight for watery nuts in respect of Belgaum market is Rs. 1·25 per bag, while that for dry nuts is Rs. 1·50 per bag, whereas at Bombay and Pune markets the same are Rs. 4·50 and Rs. 5·00 per bag respectively. The freight of coconuts transported by rail to Belgaum in small quantities is Rs. 2·53 per quintal, and for bulk quantity is Rs. 2·06 per quintal, while at Bombay market it is Rs. 7·20 for small quantity, and Rs. 5·80 for bulk quantity per quintal. The freight on coconut transported by rail to Pune market, is Rs. 6·62 for small quantity and Rs. 5·20 for bulk quantity per quintal. Cashew kernel transported by road to Bombay market, is charged at the rate of Rs. 2·50 per box of 22·68 kgs. and betelnut transported to Belgaum market by road, is charged at the rate of Rs. 6·00 per quintal.

Banking facilities which are so essential for the development of trade are adequately available at the important centres of trade in the district.

In respect of coconut, trade is brisk from September to May and dull the rest of the year. In the case of betelnuts, September to February is the brisk trading season and dull from March to August. During April and May, the trade in respect of commodities such as

cashewnut, cocum and mango, is brisk while in respect of pineapple, trade is brisk in the months of June and July.

CO-OPERATIVE MARKETING

The history of Co-operative marketing is of recent origin in the district. The development of co-operation and marketing is essential for the healthy organisation of trade in primary commodities. The co-operative societies help to regularise the trade practices by avoiding the incidence of malpractices such as contrivance on the part of the general commission agents to bid low prices, exploitation of the ignorance of agriculturists, use of faulty weights, untimely payments of the value of goods, etc. Marketing co-operatives help the agriculturists to get assured prices for their agricultural products, an incentive to increased production. These societies came into existence in the district with the main aim to secure a better return for the agricultural produce of members of primary societies and also to ensure supply of good and quality goods to consumers at reasonable rates.

There were six marketing co-operative societies functioning in the district as on 30th June 1971, with a membership and share capital of 1,429 and Rs. 1,18,000 respectively. Excepting two marketing co-operative societies, and rest were stagnant.

The following table shows the membership, share capital and business operations of these societies in the district as on 30th June 1971 :

TABLE No. 18.—Statistics of Working of The Marketing Societies In The Goa District

Number of societies	...	...	6
Membership	...	...	1,429
Capital	...	...	Rs. 1,18,000
Business operations :			
Purchase	...	...	Rs. 15,93,000
Sales	...	...	Rs. 19,26,000
Business operations :			
Purchases :			
Agricultural produce	...	...	Rs. 11,23,000
Agricultural requisites	...	...	Rs. 3,75,000
Consumer goods	...	...	Rs. 95,000
Sales :			
As owners :			
Agricultural produce	...	...	Rs. 12,12,000
Agricultural requisities	...	...	Rs. 3,90,000

Consumer goods	...	...	Rs. 2,02,000
As agents :			
Agricultural produce	...	...	—
Agricultural requisities	...	...	Rs. 1,21,000
Consumer goods	...	...	Rs. 1,000

FAIRS

Goa is famous for innumerable and magnificent religious shrines, Hindu as well as Catholic churches steeped in historical tradition. The details of these are given in Chapter 19-Places. The people in Goa attach much importance to the fairs held at these temples and churches and attend the same in large numbers. Fairs have been considered as centres of trade from the distant past. These fairs are held in almost all talukas in the district offering opportunities to petty traders to exhibit their goods, and carry on brisk sales. Various types of goods and commodities and articles are handled at these fairs in the district.

The table giving details regarding fairs in the district from the point of view of trade is given in Appendix 13.

Bazaars

Bazaars have been important centres of trade from the post. They rank next to wholesale trade centres. The rural populace purchase their day-to-day commodities and articles from the weekly bazaars. A number of commodities are brought from interior parts to the village bazaar where people from surrounding villages or towns gather to purchase their requirements.

The table given in Appendix 14 shows the place and day of Bazaars and commodities sold and their turnover.

TRADE AND COMMERCE

Fair Price Shops

Before the liberation of Goa the trade of rice, wheat, sugar, etc. was being managed and the import and export was being controlled by an autonomous body known as *Junta do Comércio Externo* (Board of External Trade), which had its own funds accrued by way of 1 per cent tax on import and export besides other taxes imposed. It had its own godowns in three different places from where the essential commodities such as rice, wheat, and sugar were supplied to the wholesalers for onward distribution to the retailers. The control of prices was being handled by the inspection staff of the Directorate of Economic Services. With the advent of Liberation, the Directorate of Civil Supplies and Price Control was created for dealing, at the beginning, with the stocks of rice, wheat and sugar existing in the

godowns of the Board of External Trade and the inspection staff was entrusted with checking the sale of commodities within the prescribed profit margin. In 1963, a rise in price of essential commodities was noticed in the open market and Government had to enforce rationing of rice, wheat and sugar and distribute these commodities on ration cards through Fair Price Shops opened in urban as well as rural areas at the stipulated prices, although these commodities were also available in the open market. In 1965 the position of rice began to deteriorate and the Government had to launch a policy of procurement of paddy and consequently the Goa, Daman and Diu Rice Control on Prices, Regulation of Disposal and Acquisition Order 1965 was proclaimed. No similar policy concerning wheat and sugar could be imposed, for Goa does not produce either wheat or sugar. Wheat and sugar as well as rice is being imported from other parts of the country as this Territory is not self-sufficient, as per the monthly allotments of the Government of India. The following statement reveals the quantity of foodgrains and sugar received from the Central stocks during the year 1969 to 1972.

(Quantity in tonnes)

Description	Quantity received by the Administration		
	1969-70	1970-71	1971-72
Rice	10,371	15,124	9,650
Wheat	11,228	9,700	11,590
Sugar	6,871 2	5,768.2	2,125.7

The paddy from landlords and agriculturists is procured through the Government authorised millers who in turn supply rice under conditions agreed upon. Under this Order every stockholder of paddy/rice is required to declare within 48 hours the stock held by him/her after deducting the seeds at the prescribed percentage and the requirement of the holder and his family at the rate of 2·5 quintals per capita per year, the balance is required to be sold to the Government.

There are Fair Price Shops both in urban and rural areas. These shops are recognised by the Government and controlled and inspected from time to time by Government officials. They are required to maintain a stock register, a visit book and a daily sale register. The issue of cash memo in respect of each sale is compulsory.

Every family is provided with a ration card and the Mamlatdars are the competent authorities to issue, delete persons therefrom and cancel these cards. The authorisation for opening a Fair Price Shop is given by the Development Commissioner who is the competent authority for the purpose. As on 30th April, 1973, there were in

the Union Territory altogether 264 Fair Price Shops, 246 being in the district of Goa. The number of Fair Price Shops in Goa rose to 257 during 1972-73. At present the Fair Price Shops are dealing with rice, wheat and sugar. The work of distribution of kerosene, vanaspati and controlled cloth has been entrusted to the Fair Price Shops as well as authorised private shops. Where there are no societies, the Fair Price Shops are entrusted to private individuals. In order to ensure smooth supply of food grains to these shops, there are 15 storage godowns of 550 tonnes capacity each, one of 1,000 tonnes capacity and 4 of 2,000 tonnes capacity each.

Trade Associations

The only trade association in the district is known as Goa Chamber of Commerce and Industry. The 'Associacao Commercial da India' as the Goa Chamber of Commerce and Industry was then known was started in 1908, with its registered office at Panaji (Goa). It was established to promote and protect the trade, commerce and industry in India and abroad and in particular, the trade, commerce and industry in the Union Territory of Goa, Daman and Diu. The Managing Committee of the Chamber consists of a President, an Honorary Secretary, an Honorary Treasurer and two Members. The 'Associacao Commercial da India' was functioning with a membership of about 34 and the number increased to more than 100 in 1911.

Currency and Coinage

J. N. da Fonseca in his 'An Historical and Archaeological Sketch of the City of Goa' states about the currency and coinage as below :

"One of the earliest institutions established by Albuquerque in Goa was a mint, and the first coins which it turned out were of gold (*manuels*), silver (*esperas* and *meias-esperas*), and copper (*leaes*). These were brought into use with great pomp and solemnity, and superseded the coins then in force, except a few, such as the gold *pardau*, worth 360 *reis* (1 s.), which still remained in circulation. During the administration of Nuno da Cunha and of Martim Affonso de Souza, new copper pieces were successively coined, while Garcia de Sa, who was at the helm of the government in 1548-49 issued a gold coin called Sao Thome, of the value of 1,000 *reis* (£0-2-9 1/3 followed by a silver piece of the same designation. Dom Luis de Athaide, some years afterwards, not content with the existing currency, sent into circulation another silver coin, valued at about 300 *reis* (10 d.) and called *bastiao*, after St. Sebastian, whose impress it bore. Subsequently, other pieces of money were coined from time to time including *pardaus* or copper *xerafins*, *bazarucos* of tutenag, silver and pewter, and gold coins. In 1713, the most important gold coin was

the *Sao Thome novo* ('new Sao Thome'), as distinguished from the earlier piece of the same metal and designation already mentioned. This coin was of three kinds, called double, single and half Sao Thome, valued respectively at 3,000 (8s. 4d.), 1,500 (4s. 2d.), and 750 *reis* (2s. 1 d.). Silver rupees, each worth 600 *reis*, were for the first time circulated in 1720, followed by silver *pardaus* of 300 *reis*, *meios-pardaus* of 150 *reis*, *tangas* of 60 *reis*, and *meias-tangas* of 30 *reis* each. In 1726 some small brass pieces were coined and issued, viz. two *tangas*, one *tanga*, *meia-tanga*, one *vintem*, fifteen *reis*, ten *reis*, five *reis*, and two and a half *reis*. These coins have been renewed, with slight variations in their form, on different occasions, the last of which was during the government of the Viscount of Sao Januario in 1871."

WEIGHTS AND MEASURES

No specific data is available about the system of weights and measures prevailing in the district of Goa in the distant past. However, J. N. Fonseca in his 'Historical and Archaeological Sketch of the City of Goa' published in 1878, states that the weights and measures prevailing in the district then, varied from each other in case of some provinces. The list of weights and measures prevailing then and given below is reproduced from the same :

Weights for solids

1	Khandi	...	...	20 mans.
1	Man	...	...	32 lbs. for copra.
1	Man	...	...	26 lbs. for sugar, bees' wax.
1	Man	...	...	24 lbs. for onions, garlic, iron, etc.
1	Man	...	...	4 doras.
1	Dora or Doddo		...	6½ lbs. for almonds, coffee, saffron, ginger, etc.; sometimes it is equivalent to 8 lbs. or about 4 lbs.
1	Pavonxeri or Painxeri			4 ratto
1	Ratto	...	...	1 lb.
	Pavonratto	...	...	¾ lb.
	Ordoratto	...	...	½ lb.
	Pauratto	...	...	¼ lb.

Weights for liquids

1	Xero	...	...	12 4/5 ozs.	For oil and butter.
	Ordoxero	...	...	6 2/5 ozs.	
	Pausero	...	...	3 1/5 ozs.	
1	Noutango	...	...	1 3/5 ozs.	
	Ordemnoutang		...	0 4/5 ozs.	

Measures for solids

1 Khumbo	... ...	20 khandis
1 Khandi	... ...	20 kuros
1 Kuro	... ...	2 pailis
1 Paili	... ...	4 poddis
1 Poddi	... ...	2 ordipoddis
Ordipoddi, Solguem, Natti.		2 ordinattis
Ordnati or Ardnati	...	2 guirnatis
Guirnati	... ...	2 Solahos
1 Solaho or Solavam	...	2 bothisavos or bothisolavem.

The *Por*, which may be taken as the basis of these measures, consists of 48 cubic inches.

Measures for liquids

1 Khandi	... ...	20 mans or almudes.
1 Man	... ...	2 caloes or colsos.
1 Calao	... ...	6 canadas ; in salcete 4 canadas.
1 Canada	... ...	2 meias-canadas.
1 Meia-canada	...	2 quartilhos.
1 Quartilho	... ...	1 xero. The sub-division of the xero are similar to those in the table of weights for liquids.

The units of weights and measures differed not only from place to place but also from community to community in certain cases. With the Liberation of the Territory, the Government could never allow such a state of confusion resulting from the diversity in the prevailing weights and measures for long, and to remedy the confusion the only way was to bring uniformity in weights and measures. With this in view the Standards of Weights and Measures Act, 1956, was made applicable to the Territory from November 1, 1964. This Act laid down the basic units under the metric system.[1] With a view to enforcing the Standards of Weights and Measures Act, it was felt necessary to introduce a state legislation. The work was of a laborious and gigantic nature and as such trained personnel were appointed for the purpose in 1967. Subsequently, the Goa, Daman and Diu Weights and Measures (Enforcement) Bill was introduced in the Legislative Assembly and was passed and assented by the President on 30th April 1968. The Act provides to specify the standards and prohibits the use of non-standard weights and measures. It also

[1] The metric system derives its name from the primary unit of measurement, the metre. The prototype of the metre is maintained at the International Bureau of Weights and Measures at Serres, France.

provides for the appointment of Controller and Inspectors and also maintains uniformity in the metric system of weights. Establishment of trade is required to be registered with the Controller of Weights and Measures. It prohibits the sale, dealing and repairing of weights and measures without obtaining licence from the Controller. The provisions under Chapter IV of Goa, Daman and Diu Weights and Measures (Enforcement) Act, 1968 were made effective on the 1st of August 1968 as to acquire the powers to make the Rules thereunder. The Goa, Daman and Diu Weights and Measures (Enforcement) Act, 1968, and the Goa, Daman and Diu Weights and Measures (Enforcement) Rules, 1969, came into effect from 17th February 1969 and Rules thereunder from 18th February, 1969. To serve the purpose of the said Act and Rules, the administrator of Goa, Daman and Diu appointed the Controller of Weights and Measures and the Notification to that effect was published in the *Government Gazette,* dated 8th May 1969.

Prior to this legislation the Weights and Measures were under the control of respective municipalities of each taluka. Each municipality had its own regulations in this regard. It did not provide any specifications for weights and measures.

* * *

CHAPTER 7—COMMUNICATIONS

INTRODUCTION

Transport and communications play a vital role in the economic development and the social well-being of the district population. The district has several modes of transport such as railways, roads, inland and coastal navigation and air transport. Being a centre of tourist interest, other communication facilities such as Posts and Telegraphs, Telephones, etc., are also essential for the development of tourism in the district. It has a radio station too.

In this chapter, an attempt has been made to give a brief description of roads and communication facilities in the district.

OLD TIME TRADE ROUTES

The old trade routes in the district of Goa were through Keleghat touching on the way, Sanquelim, Bicholim and Mapusa ; through Tinai touching Usgao, Candeapar, Mhardol, Ponda and Durbate ; and the route towards Digui touching on the way Sanguem, Quepem, Paroda, Margao and Bali. Another trade route was through Pernem at the mouth of the River Tiracol. The trade around Mapusa was facilitated by the River Caisua and at Margao by the River Betul. All the trade was carried on using donkeys as the beasts of burden.

ROADS

Road transport is an important means of transport and in the district it serves as a feeder to inland water transport in the movement of iron ore. The roads in Goa are well integrated and connected with the neighbouring States of Maharashtra and Karnataka.

The district has fairly good roads. Road density is about 103 kilometres per 100 square kilometres of area and 4,822 kilometres per million population. The length of roads which was 2,639 kilometres in 1961 rose to 3,834 kilometres in 1970-71, and during 1971-72 it was increased to 4,384 kilometres.

The roads in the district are generally classified as National Highways, State roads, District roads and Village roads.

National Highways

National Highways are defined as main arterial or trunk roads running through the length and breadth of the country and together

forming a system communicating major cities, ports, capitals of States and other important highways.

Three main highways, mainly, Panaji/Ponda/Anmod Road, Former West Coast Road and the road from Cortalim to Mormugao Harbour, have been declared as National Highways No. 4A, 17 and 17A respectively.

These National Higways are old existing roads not conforming to the standards of the National Highways. They are black topped in their entire length excepting a small portion of 15 kilometres in respect of the Former West Coast Road. These are all-weather roads and are motorable throughout the year. A major portion of these roads passes through built up area. The allowed laden weight on these roads is 15 tonnes.

The Panaji/Ponda/Anmod Road—National Highway No. 4A.

This road connects Panaji, the capital of the Union Territory of Goa, Daman and Diu, with Belgaum, an important town in the Karnataka State. The road covers a distance of 153 kilometres of which a stretch of 70 kilometres lies in the district of Goa. This road passes partly through built up area and partly through hilly tract and forest area. A length of 12 kilometres between Malem and Anmod lies in the Ghat section. The existing road has three major bridges on its alignment. They are the Ponte-Linhares Bridge (Pato Bridge) near Panaji at kilometre 0·3, Banastarim Bridge across the Cumbarjua Canal at kilometres 14·6 and the Candeapar Bridge at kilometres 35. This national highway touches on the way important places such as Ribandar, Old Goa, Mhardol, Ponda, Malem, etc. All the river crossings on the road are bridged. The following statement gives the important roads emanating from this highway :

Location of off-take		*Roads leading to*
(1) Old Goa	at KM 9/8	Neura towards left; Cumbarjua towards right.
(2) Corlim	at KM 12/3	Carambolim towards left.
(3) Banastarim	at KM 14/6	Marcela, Tonca towards right.
(4) Mhardol	at KM 21/9	Priol, Savoi-Verem towards right; Marcaim towards left.
(5) Farmagudi	at KM 26/9	Shantadurga, Ramnath temples, Engineering College towards left.
(6) Ponda	at KM 28/0	Margao, Sanvordem towards left.
(7) Ponda	at KM 28/8	Savoi-Verem towards right.
(8) Candeapar	at KM 34/5	Opa Water Works towards left.
(9) Candeapar	at KM 35/4	Usgao towards right.
(10) Tisca	at KM 38/7	Usgao, Sanquelim, Mapusa towards right.

Location of off-take		*Roads leading to*
(11) Darbandora	at KM 44/3	Sancordem towards right.
(12) Darbandora	at KM 45/0	Sanvordem towards left.
(13) Suctoli	at KM 52/4	Dhat farm towards left.
(14)) Molem	at KM 57/4	Colem towards left ; Sancordem towards right.

Besides, there are a number of village roads and private roads leading to mines that either take off from or are crossed by this road.

Former West Coast Road—National Highway No. 17.

The former West Coast Road that is National Highway No. 17 originates from Mahad in the Kolaba district of Maharashtra State and connects it to Trichur in Kerala State. A length of 137 kilometres of this road between Patradevi in the North and Polem in the South lies in the district of Goa. At present there are two major missing links on this highway as both the places are unabridged. They are the Zuari Bridge and the Colvale Bridge. In the absence of bridges, are plying, mechanized ferries that can carry vehicle traffic. The work of the Zuari Bridge between Agasaim and Cortalim is in progress. This highway touches on the way, important places such as Colvale, Mapusa, Porvorim, Panaji, Calapur, Goa-Velha, Agasaim, Cortalim, Verna, Margao, Cuncolim, Bali, Canacona, Mashem and Polem. The following statement gives the important roads emanating from this National Highway.[1].

Location of off-take		*Road leading to*
	Towards Maharashtra Border	
(1) Malpem	at KM 28/1	Pernem town towards right.
(2) Dargalim	at KM 23/8	Nagzar Ibrampur towards left.
(3) Colvale	at KM 19/7	Revora, Pirna towards left.
(4) Cunchelim	at KM 14/4	Sanquelim, Bicholim, Valpoi towards left.
(5) Dhuler	at KM 13/0	Siolim towards right.
(6) Mapusa	at KM 11/2	Colvale towards right ; Saligao, Calangute towards right.
(7) Guirim	at KM 9/8	Guirim towards right ; Bastora towards left.
(8) Porvorim	at KM 7/0	Socorro towards left ; Sangolda towards right.
(9) Porvorim	at KM 4/4	Saligao towards right ; Badem, Britona towards left.
(10) Porvorim Plateau	at KM 2/8	Betim, Verem towards right.

[1] Distances are measured as emanating from Panaji in two directions, one towards the Maharashtra State and the other towards the Karnataka State.

Location of off-take		*Roads leading to*
(11) Malim	at KM 1/5	Betim, Verem towards right; Aldona towards left.
(12) Panaji	at KM 0/0	National Highway No. 4A towards left.

Towards Karnataka Border

(13) Calapur	at KM 2/8	Merces village towards left.
(14) Bambolim	at KM 5/8	Radio Station towards right; Bombolim village towards right.
(15) Siridao	at KM 9/5	Siridao beach towards right.
(16) Pilar	at KM 12/3	Seminary of Pilar and road leading to Neura towards left.
(17) Cortalim	at KM 17	National Highway 17A leading to Vasco-da-Gama town and Mormugao Harbour towards right.
(18) Cortalim	at KM 18	Cortalim village and road leading to Margao, Rasaim towards left.
(19) Verna	at KM 24/6	Cansaulim Railway Station towards right.
(20) Nuvem	at KM 29/6	Majorda Railway Station towards right.
(21) Margao	at KM 31/8	Colva beach towards right.
(22) Margao	at KM 34/0	Crossing of railway line and road leading to Orlim, Carmona towards right.
(23) Margao	at KM 34/2	Road leading to Quepem, Sanguem towards left.
(24) Navelim	at KM 38/2	Road leading to Dramapur, towards left.
(25) Chinchinim	at KM 40/2	Road leading to Assolna, Betul towards right.
(26) Chinchinim	at KM 41/0	Road leading to Gudi, Chandor towards left.
(27) Chinchinim	at KM 43/0	Road leading to Veroda.
(28) Cuncolim	at KM 45/4	Road leading to Quepem, Amolem towards left.
(29) Cuncolim	at KM 45/2	Road leading to Assolna, Betul towards right.
(30) Bali	at KM 48/8	Road leading to Adnem, Quepem towards left; Fatorpa towards right.

Location of off-take		*Roads leading to*
(31) Bali	at KM 57	Road leading to Padi Gocolden towards right.
(32) Canacona	at KM 68/4	Road leading to Agonda toward right.
(33) Canacona	at KM 69/8	Road leading to Talpona toward right.
(34) Canacona	at KM 74/6	Road leading to Gaodongren towards left.
(35) Canacona	at KM 76/4	Road leading to Partagal-Matl towards left.
(36) Poinguinim	at KM 79/6	Road leading to Galgibaga Talpon towards right.
(37) Mashem	at KM 84/8	Road leading to Galgibaga toward right.
(38) Mashem	at KM 87/8	Road leading to Loliem toward left.
(39) Mashem	at KM 89/6	Road leading to Loliem toward left.

Note : For National Highway 17, Right and Left refer to th directions as seen when travelling from Pernem t Canacona.

Highway from Cortalim to Mormugao Harbour—National Highway No. 17 A : This highway has a length of only 18 kilometres. I lies between Cortalim, near kilometres 17 of National Highwa No. 17 and Mormugao Harbour. The highway on the way touche the important town of Vasco-da-Gama. The following statement give the roads emanating from this National Highway :—

Location of Off-take	*Road leading to*
(1) Chicalim village at KM 25/8	Dabolim Railway Station, Zua Agro Chemicals.
(2) Chicalim plateau at KM 27/4	Road leading to Airport toward left.

Note : For National Highway No. 17A, Right and Left refer t the directions as seen when proceeding from Cortali to Mormugao Harbour.

State Roads : There are a number of State roads in the district. I what follows is given the information in respect of these roads.

1. *Ponda-Borim Road* : It starts from Ponda and runs upto Bori Bridge. It has a length of 7·2 kilometres. The road being asphalted, is motorable throughout the year.

2. *Link Road connecting Ribandar Road to Jawaharlal Nehru Bridge:* This road is a link between Ribandar Road (part of National Highway No. 4A—Panaji/Anmod) to Mandovi Bridge. The road is asphalted and has a length of 0·85 kilometres.

3. *Cunchelim-Piliem Road:* This road starts from Panaji-Pernem Road, at kilometres 15/4, and runs upto Piliem. On the way it touches the villages of Tivim, Assonora, Bicholim, Sanquelim and Onda. This is a fully bridged road with bridges at Tivim, Assonora, Bicholim, Sanquelim and Usgao. (All in R.C.C. Structure and Superstructure). The total length of this road is 51·0 kilometres and it is asphalted. It is motorable throughout the year.

4. *Onda-Parvor Road:* It starts from Cunchelim-Piliem Road, from its junction at Onda. It touches the town of Valpoi on the way. It is partly black topped and partly in macadam surface. The total length of this road is 21·70 kilometres. The road upto Codal is motorable throughout the year.

5. *Panaji Dona-Paula Road:* This road starts from the Secretariat Building at Panaji and runs upto the jetty at Dona-Paula. The total length of this road is 6·83 kilometers and it is blacktopped. It is motorable throughout the year.

6. *Margao-Digui Road:* This road starts from Margao town and runs upto Digui. It touches the towns of Quepem. Sanvordem and Sanguem on the way. The road is black-topped upto Maulinguem. The road from Maulinguem to Digui has a macadam surface. The total length of this road is 47·80 kilometres.

7. *Sanguem-Devcurpem Road:* This road starts at kilometres 60/6 from the Margao-Digui road and runs upto Devcurpem. It touches the villages of Curpem and Vichundrem. The road is partly black-topped and partly in macadam surface. The total length of this road is 20·54 kilometres.

8. *Branch Road Ponda-Durbate:* This road starts from Ponda town and runs upto Durbate. It touches the villages of Capileshwar and Telaulim. The road is asphalted and is motorable throughout the year. The total length of this road is 4,160 kilometres.

9. *Betim to Aguada Road:* This road starts from Betim and runs upto Aguada. The total length of this road is 4·38 kilometres. The road is asphalted and is motorable throughout the year.

10. *Mapusa-Reis Magos Road:* This road starts from Mapusa town and runs upto Reis Magos. It touches the villages of Parra, Saligao. Pilerne and Verem. This road is asphalted and is motorable throughout the year. The total length of this road is 12·12 kilometres.

11. *Dargalim-Nagzar Road:* This road starts from National Highway No. 17—Patradevi-Polem, in Pernem taluka at a distance of

5 kilometres from Pernem town, at Dargalim and runs upto Nagzar, in a length of 3·0 kilometres. The road is asphalted and is motorable throughout the year.

12. *Assonora-Saquirval Road:* This road starts from Cunchelim-Piliem Road from Assonora at the end of Assonora bridge and runs upto the district border at Saquirval. It touches the villages of Nanora, Cansarpale and Dodomarg. The road is asphalted and its total length is 9·23 kilometres. This road is motorable throughout the year.

13. *Bicholim, Maulinguem Road:* This road branches off from Cunchelim-Piliem road at Bicholim and runs upto Maulinguem near the border of the district. The total length of the road is 2·50 kilometres. It is partly black-topped and partly in macadam surface.

14. *Branch Road to Dabolim Airport:* This road starts from National Highway 17A—Cortalim to Mormugao, at Chicalim Plateau. The road is blacktopped and is motorable throughout the year. It has a total length of 3 kilometres.

15. *Bicholim-Banastarim Road:* This road branches off from the Mapusa/Sanquelim Road at Bicholim and runs upto Banastarim. The road with a total length of 129·80 kilometres is black-topped and is motorable throughout the year.

16. *Sanquelim-Chorlem Road:* It starts from Mapusa/Sanquelim road at Sanquelim and runs upto Chorlem near the border of the district. The road is partly black-topped and partly in macadam surface It has a total length of 9 kilometres.

17. *Ondu-Birondem Road:* This road branches off from the Mapusa/Valpoi Road at Onda and runs upto Birondem. The road is partly black-topped and partly in macadam surface. The total length of this road admeasures 9·99 kilometres

18. *Valpoi-Thana Road:* This road starts from the town of Valpoi and runs upto Thana. The road is partly black-topped and partly in macadam surface. It has a total length of 9·5 kilometres.

19. *Valpoi-Colem Road:* It starts from Valpoi and runs upto Colem. It touches the villages of Sancordem and Molem on the way. The road is partly black-topped and partly in macadam surface. It has a total length of 20·53 kilometres.

20. *Valpoi-Kelgat Road:* This road starts from Valpoi and runs upto Kelgat. The road is partly black-topped and partly in macadam surface. It has a total length of 6·28 kilometres.

21. *Borim-Sanvordem Road:* Starting from the Borim bridge, this road runs upto Sanvordem, touching the villages of Siroda and Ponchavadi on the way. It is black-topped and is motorable throughout the year. The total length of the road is 17·00 kilometres.

22. *Darbandora-Sanvordem Road:* This road starts from National Highway No. 4A—Panaji, Aucreal, at Darbandora near Km. 45 and runs upto Sanvordem. It touches the villages of Dabal and Codli. The road is black-topped and the total length is 17·00 kilometres.

23. *Branch Road to Dabal:* This road branches off from Darbandora/Sanvordem road at Dabal and runs upto Dabal River. It has a macadam surface and a length of 2·54 kilometres.

24. *Colem-Sigao Road:* It starts from the railway station at Colem and runs upto Sigao. It has a macadam surface. The total length of the road is 1·85 kilometres.

25. *Canacona-Netorlim Road:* It starts from the town of Canacona and runs upto Netorlim. It has a total length of 23·37 kilometres, and has a macadam surface.

26. *Circuit Road to Cotigao:* It is a circuitous road in forest area emanating and terminating at Ordopredo touching on the way, Cotigao. It has a macadam surface and has a length of 27·35 kilometres.

27. *Branch Road to Cabo-Raj Niwas:* This road branches off from the Panaji/Dona Paula road near the traffic island at Dona Paula and runs upto Cabo Raj Niwas. The road with a total length of 1·89 kilometres is black-topped and is motorable throughout the year.

28. *Quepem-Cabo da Rama Road:* It emanates from Quepem and runs upto Cabo da Rama touching on the way the villages of Bali and Fatorpa. It is partly black-topped and partly in macadam surface. It has a length of 12·77 kilometres.

29. *Quepem-Pirla Road:* It emanates from the town of Quepem and terminates at Pirla. It is partly black-topped and partly in macadam surface. It has a total length of 16·5 kilometres.

30. *Quepem-Curdi Road:* It starts from Quepem and ends at Curdi. The road with a length of 16·4 kilometres is black-topped and is motorable throughout the year.

31. *Rivona-Curpem Road:* It starts from Rivona and runs upto Curpem. It has a macadam surface and a length of 0·2 kilometres.

32. *Branch Road to Colem:* Emanating from the Margao/Diquem road at Sanguem and running upto Colem, this road has a total length of 6 kilometres. It is black-topped and is motorable throughout the year.

33. *Sanguem-Cumbari Road:* This road starts from the town of Sanguem and runs upto Cumbari. It is partly black-topped and partly in macadam surface. It has a total length of 10 kilometres.

34. *Branch Road to Maida:* This road branches off from the Mungoi/Digui Road and runs upto Maida. It has a macadam surface and a length of 10 kilometres.

35. *Branch Road to Vadem:* This road branches off from the Mungoi/Digui road and runs upto Vadem. It has a macadam surface and a length of 1·47 kilometres.

36. *Darbandora-Sanvordem Road:* This road starts from National Highway No. 4A Panaji-Anmod, at kms. 44 at Darbandora and runs upto Sanvordem. The road is black-topped and its total length is 9·00 kilometres.

37. *Malpem-Naibag Road:* It emanates from Naibag and runs upto Malpem. With a total length of 2·5 kilometres, the road is black-topped and is motorable throughout the year.

38. *Diversion Road at Sanquelim.* It is an internal road in the town of Sanquelim. With a length of 1·47 kilometres, it is black-topped and is motorable throughout the year.

39. *Branch Road at Siridao:* It is a diversional road near the Siridao bridge. It has a length of 0·245 kilometres and is black-topped.

40. *Diversion Road at Ribandar:* This is a diversional road to the Panaji/Anmod National Highway No. 4A at Ribandar. It has a length of 0·53 kilometres and is black-topped.

41. *Diversion Road at S. Pedro:* It is a diversional road to the Panaji/Anmod National Highway No. 4A at S. Pedro. It has a length of 0·14 kilometres and is black-topped.

42. *Borim-Mangur Road:* It emanates from the Borim bridge and terminates at Mangur, touching on the way, the villages of Raia and Ambora. It has a total length of 9·9 kilometres. It is black-topped and is motorable throughout the year.

43. *Mangor-Colva Road:* This road branches off from the Patradevi-Polem National Highway No. 17, at Mangor and runs upto Colva beach which has a great tourist attraction. It has a length of 1·5 kilometres. It is black-topped and is motorable throughout the year.

District Roads: Some roads have been classified as district roads. Some of them are totally black-topped and some are partly in macadam surface. A list of district roads is given in Appendix 15.

Village Roads: " Goa has rural roads of more than 2,043 kilometres. These roads are totally inadequate to serve the villages in the interior talukas. Among the talukas with poor rural road lengths, are Mormugao, Bicholim and Quepem. The condition of these roads generally is bad."

A list of village roads and panchayat roads in the district is given in Appendix 16.

Forest Roads: As on March 31, 1972, the district had a total of 171 km. of forest roads out of which only 28 kilometres were black-topped.

Districtwise length of roads by type of surface as on 31st March 1972 is given in the statement that follows :—

(length in kms.)

Goa district	Total	Type of Surface		
		Black topped or bituminous	Cement/ Concrete	Water bound/ macadam/ laterite
1	2	3	4	5
District of Goa	4,384	1,669	4	2,711
(1) Extra Municipal Roads ..	4,227	1,548	2	2,677
(*i*) National Highways ..	227	211	1	15
(*ii*) State Highways . ..	657	577	..	80
(*iii*) Major District/District Roads	1,129	465	1	663
(*iv*) Forest Roads .	171	28	..	143
(*v*) Village Roads .	2,043	267	.	1,776
(2) Municipal Roads . ..	157	121	2	34

VEHICLES

By the end of 1971-72, there were registered in the district, 552 motor cars, 53 buses, 393 goods vehicles, 943 motor cycles, 50 taxis and 11 rickshaws. There were in the district, a number of cycles owned by private individuals and for hire. The following statements give information in respect of bicycles, talukawise, urban and rural, for the year 1971-72 :—

Municipality	No. of cycles and taxes levied					
	Total		Private cycles		Cycles for hire	
	No.	Rs.	No.	Rs.	No.	Rs.
otal .	6,272	32,291	4,737	20,085	1,535	12,206
Panaji .	2,301	13,005	1,667	7,148	634	5,857
Margao .. .	1,762	6,086	1,418	4,022	344	2,064
Mapusa . ..	540	2,596	431	1,724	109	872
Vasco-da-Gama .	1,066	7,276	846	5,076	220	2,200
Ponda	138	942	100	600	38	342
Bicholim .	173	993	97	650	76	343
Pernem ..	32	109	19	57	13	52
Quepem ..	73	231	38	93	35	138
Sanguem ..	69	338	49	234	20	104
Chauri (Canacona)	44	164	12	42	32	122
Valpoi	74	551	60	439	14	112

INFORMATION ON BICYCLES, TALUKAWISE, FOR THE DISTRICT OF GOA

Taluka	No. of cycles and taxes levied						Bullock carts and taxes levied	
	Total		Private cycles		Cycles for hire			
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
1	2	3	4	5	6	7	8	9
Total ..	22,679	33,162	18,733	28,081	2,652	2,136	1,394	2,945
Tiswadi .	2,220	3,082	1,826	2,552	227	176	167	354
Salcete ..	6,747	10,992	5,823	10,019	820	698	104	275
Bardez ..	7,330	9,743	5,891	7,934	1,053	826	406	983
Mormugao ..	1,050	1,630	895	1,475	137	101	18	54
Ponda ..	1,256	1,927	1,156	1,770	61	51	39	106
Bicholim ..	875	761	652	464	109	108	114	189
Pernem ..	919	1,574	650	995	84	101	185	478
Quepem ..	1,137	1,735	964	1,470	78	20	95	245
Sanguem .	366	694	327	602	17	17	22	75
Canacona ..	572	813	421	664	59	38	92	111
Satari ..	187	211	128	136	7	.	52	75

ROAD TRANSPORT

Road Transport in the district has not yet been nationalised. However, the Government have recently taken a decision to nationalise passenger transport services in the district during the Fifth Five Year Plan.

There are about 440 transport undertakings engaged in passenger transport. They ply buses connecting different places in the district. The routes covered by these transport operators are as follows :—

Baga Calangute to Mapusa ; Betim to Birondem, Bombay, Colvale, Dodomarg, Aldona (via Britona, Pomburpa), Calangute (via Saligao Candolim), Carapur (via Sanquelim), Querim (via Sanquelim), Cuncolim, Naibag, Salem (via Assonora, Cansarpale), Sanquelim, Sawantwadi, Siolim, Thana (via Valpoi) and Valpoi ; Betul to Sanguem ; Deusua to Chopdem ; Durbsate to Marcaim ; Fatorpa to Cuncolim and Veroda ; Canacona to Sadashivgad ; Carwade to Mangueshi (via Ponda) ; Quepem to Curchorem ; Querim to Chopdem (via Quiranpani) ; Macasana (via Paliem, Arambol, Corgao) and Naibag ; Margao to Adnem, Agonda, Ambelim, Arossim, Assolda (via Tilamole), Assolna, Bandora, Baradi, Belgaum, Betul (direct and via Chinchinim), Bhati, Bombay (via Ponda, Dodomarg), Chandor, Dabhal (via Curchorem), Fatorpa, Hubli, Calai, Costi, Cavelossim, Cavelossim (via Carmona), Quepem, Querim, Colamb, Colva (via Cortalim), Consua, Curchorem, Curtorim, Cumbarjua (via Marcela), Cuncolim, Cortalim Cortalim (via Loutolim), Marcaim, Macasana, Mendure, Mapusa, Mapusa (via Ponda), Muddain (via Betalbatim, Sancoale), Muddain (via Pale, Cansaulim), Mormugao, Netorlim, Nuvem, Palolem, Polem, Rachol, Raia, Rasai, Rivona, Sadashivgad, Salem (via Borim, Dodomarg), Sanguem, Sanquelim, Sancoale, Siroda,

Savoi-Verem, Sawantwadi, Talpona (via Poinguinim), Tonca (direct and via Marcela), Utorda, Usgao, Vasco-da-Gama (via Rasai), Valpoi, Velim and Viliena (via Sanguem); Mapusa to Ambari, Belgaum, Badem (via Assagao), Betim (direct and via Ucassaim and Britona), Colvale, Bicholim (direct and via Poira and Maem), Aldona, Calangute Calvim, Camurlim, Candolim, Carona, Colamb, Colvale, Colem, Mencurem (direct and via Pirna and Assonora), Pirna, Revora, Sadashivgad, Sanguem and Siolim; Mormugao to Baradi (via Margao and Assolna), Canacona, Quelossim, Cuncolim (via Margao, Cortalim), Sanguem, Uguem and Velim; Morgim to Patradevi; Naibag to Macasana; Panaji to Adoshi, Agasaim, Amona, Amona (via Mapusa), Baradi (via Ponda and Assolna), Belgaum, Chimbel, Dabhal, Dona Paula, Dongri, Durbate, Calangute, Calapur, Carambolim, Quepla, Querim, Colem, Cumbarjua, Margao, Margao (via Ponda), Marcaim, Mapusa (direct and via Saligao and Parra), Miramar, Mormugao, Nagargao, Nerul, Netorlim (via Siroda), Neura (direct and via Old Goa), Ponda, Pilar, Ribandar, Sadashivgad, Sanquelim, Sanguem, Sanvordem (direct and via Siroda), Savoi-Verem (via Ponda), Siridao, Siolim, Talegao, Tonca, Usgao, Valpoi, Volvoi (direct and via Marcela), Velguem and Zambaulim (via Curchorem); Sanguem to Amona (via Margao), Baradi and Siolim (via Borim and Mapusa); Sanvordem to Baradi and Curchorem; Sawantwadi to Valpoi (via Dodomarg), Siridao to Banastarim, St. Bartholomew Church to Madel Jetty and Vasco-da-Gama to Sadashivgad and Sadolshem (via Canacona).

The Maharashtra State Road Transport Corporation plies buses daily from Panaji to Bombay, Poona, Sawantwadi and Vengurla. Similarly, the Karnataka State Road Transport Corporation has connected places in that State such as Belgaum, Hubli, Bangalore, etc., with Panaji. Even the private operators ply buses connecting different places both in Maharashtra and Karnataka.

GOODS TRANSPORT

Goods transport in the district is carried on generally by public as well as private carriers. The survey of goods traffic on roads conducted in 1969 by the General Statistics Department of the Government of Goa, Daman and Diu, revealed that more than 70 per cent of the carriers enumerated were public carriers. More than 65 per cent were recorded as having regular permits while the remaining were holding temporary permits. A perusal of the same survey shows that almost 85 per cent of the carriers were plying short distance haulages upto 40 kilometres. Bicholim and Sanguem talukas accounted for more than 60 per cent of the traffic either starting or terminating within the

talukas, due mainly to the intense mining activity in the area. The minimum amount of road transport activity was noticed in respect of Pernem and Canacona talukas.

Although transport of mineral ore is the single largest factor predominating the road transport system in the district, the survey revealed that a large variety of commodities besides mineral ore are transported, though in limited quantities. The information on all the commodities that were found to be transported during the survey have been classified under the group code and is given in Appendix 17.

The following statement gives the tonnage of principal commodities which were transported by motor vehicles during the survey conducted in 1969, already referred to above :—

Group Code	Details	First round		Second round	
		Quantity in tonnes	Per Cent	Quantity in tonnes	Per Cent
0	Food and live animals ..	3,075 4	2.6	4,031.7	2.9
1	Beverages and tobacco ..	320.0	0.3	195.3	0.1
2	Crude materials, inedible oils except fuels, mineral ores, etc.	1,09,333.6	91.2	1,26,411.1	91.5
3	Mineral fuels, lubricants and related materials.	2,883.9	2.4	3,362.6	2.4
4	Animal and vegetable oils and fats	5.0	0.0	45.8	0.0
5	Chemicals .. .	476.5	0.4	387.9	0.3
6	Manufactured goods ..	2,819.3	2.3	2,299.1	1.7
7	Machinery and transport equipment.	187.8	0.2	376.5	0.3
8	Miscellaneous manufactured articles.	431.7	0.4	278.1	0.2
9	Others . .	280.1	0.2	816.4	0.6
	Total ..	1,19,813.3	100.0	1,38,204.5	100.0

The statement above clearly shows that mineral ores account for about 92 per cent of the commodity traffic of the district while food and live animals, mineral fuels, lubricants and related minerals and mineral goods each separately account for a little more than 25 per cent of the total commodity traffic.

Goods traffic in animal driven vehicles represents a very meagre proportion of the total goods traffic. However, it assumes importance in areas where other transport facilities are not available and where the distance of haulage and quantum of commodities make motor transport uneconomical.

Various types of commodities transported by bullock carts check-post-wise is given in Appendix 18.

RAILWAYS

The district has only one metre-gauge railway line, extending from Castlerock to Mormugao Harbour. Having a length of 82 kilometres within the district, it is linked up with the South Central Railway at Londa on the Bangalore-Poona section. The railway has 14 stations between Castlerock and Mormugao Harbour, both inclusive. It runs a distance of about 82 kilometres in the district of Goa from Mormugao Harbour to the very interior of the district at Caranzol.

The work of construction of port and railways commenced simultaneously in 1882 after entering into an agreement with the Western India Portuguese Guaranteed Railway Company Limited, which was reached in 1881. The first portion of the railway from Mormugao to Sanvordem with an extension of 41 kilometres was incorporated on January 15, 1887. The remaining portion of the line was opened on 31st January of the following year. The railway was connected to the then Southern Maratha railway on January 31, 1888.

The railway initiated its exploration in the then Portuguese territory with 12 steam locomotives, 37 bogies and 147 wagons. In order to facilitate the movement of the railways in the Ghat section, the rail work and the tunnels were constructed with sufficient width to provide for an eventual laying of double-line in the passes through the ridge. Of the 82 kilometres of the railway line in the district, the distance of 38·64 kilometres from Mormugao to Chandor is laid on the level and easy terrain with no obstacles. The next portion of 22·54 kilometres upto Colem is also laid on easy terrain and on level ground but has to cross two important rivers namely the Paroda and the Sanguem. The distance of 20·93 kilometres from Colem to the border of the district at Caranzol is laid on extremely uneven and difficult terrain with many tunnels and bridges. This railway was worked by the Southern Railway in agreement with the Portuguese Government. The Southern Railway Line stopped working on this branch line from January 1, 1956 and the management was taken over by the Portuguese Government. This resulted in the cutting off, of both passenger and goods traffic from the rest of the country from that date. The railway with a capital outlay amounting to Rs. 2·30 crores at the end of the year 1953-54 had in that year, gross savings amounting to Rs. 30,00,000·00 and net savings of Rs. 3,61,000·00. Since Liberation though, booking arrangements with the Southern Railway have been resumed. However, the freight and passenger fare rates have not been integrated with the all-India system which causes considerable inconvenience to the public.

The traffic in 1961 was entirely local and consisted on 9,67,532 passengers and a freight of 5,84,169 tonnes. Margao and Sanvordem

have a heavy passenger traffic. The goods traffic almost wholly consisted of mineral ores to Mormugao, and amounted to 5,83,367 tonnes, i.e. about 9 per cent of the total exports of Goa. The ore was booked from the four stations as shown below :

Station	Weight of ore (in tons)
Colem	2,36,178
Calai	98,626
Sanvordem	2,48,101
Margao	462
Total ...	5,83,367

The freight on ore varies from Rs. 5·04 per ton from Colem to Rs. 3·92 per ton from Margao station to Harbour. The minimum freight on ore is the carrying capacity of the wagons used, less 10 per cent. Double the rate is charged for weight loaded in excess of the carrying capacity. Besides iron ore, the rest of the goods traffic is mainly of firewood.

BRIDGES

Many rivers and *nallas* criss-cross the whole countryside. They facilitate transport of goods and public bridges have been constructed over a number of rivers and *nallas*. Many of the bridges were destroyed at the time of Liberation in 1961. All these have now been re-constructed. However, there still remains 15 unbridged river crossings in Goa and some of them are on important roads. There are a few weak bridges necessitating load restrictions. They are at Banastarim, Borim, Siridao and Dramapur. The construction of the bridge across the River Mandovi is a notable feature. The bridge has a length of about 0·675 kilometres connecting Panaji the capital, with northern parts of Goa. The construction of another important bridge on the river Zuari has been taken up. This bridge is providing a most important missing link on the West Coast Highway.

The table on page 436 gives the description in respect of the bridges in the district.

PORTS

Among all the minor ports, the one at Panaji is of utmost importance since this port is a terminal station for the stream of the passenger coastal service between Bombay and Panaji.

TABLE No. 1.—DESCRIPTION IN RESPECT OF BRIDGES

Serial No.	Name of the Bridge	Name of the nearest village or town	Type of the construction	Length Metres	Cost of the construction	Year of construction	Remarks
					Rs.		
1	Linhares Bridge	Panaji	Laterite Arch Masonry	107.65	....	1859	
2	Siridao Bridge	Siridao	Laterite Arch Masonry	110.00	...	1860	
3	Banastarim Bridge	Banastarim	Steel Bridge	126.75	8,96,000.00	1926	
4	Borim Bridge	Borim	Steel Bridge	244.78	12,00,000.00	1930	Repaired in 1962.
5	Dramapur Bridge	Dramapur	Laterite Arch Masonry	30.00	50,000.00	1942	
6	Colem Bridge	Colem	R. C. C. Bridge	50.00	2,50,600.00	1948	
7	Sanvordem Bridge	Sanvordem	Steel Bridge	90.60	3,50,000.00	1956	
8	Rivona Bridge	Rivona	Steel Bridge	44.00	1,50,000.00	1946	
9	Poinguinim Bridge	Poinguinim	R. C. C. Bridge	21.00	52,000.00	1955	
10	Cumbarjua Bridge	Cumbarjua	R. C. C. Bridge	43.00	2,80,000.00	1967	
11	Assonora Bridge	Assonora	R. C. C. Bridge	64.00	2,47,000.00	1962	
12	Torda Bridge	Torda (Britona)	R. C. C. Bridge	15.90	80,000.00	1968	
13	Baga Bridge	Baga	R. C. C. Bridge	23.80	80,000.00	1968	
14	Poroscodem Bridge	Poroscodem (Pernem)	R. C. C. Bridge	6.35	80,000.00	1968	
15	Uguem Bridge	Uguem (Pernem)	R. C. C. Bridge	20.00	1,00,000.00	1968	
16	Bicholim Bridge	Bicholim	R. C. C. Bridge	25.00	1,92,000.00	1964	
17	Sanquelim Bridge	Sanquelim	R. C. C. Bridge	56.00	7,00,000.00	1957	
18	Cansarpale Bridge	Cansarpale	R. C. C. Bridge	12.00	80,000.00	1970	

19	Usgao Bridge	Usgao	R. C. C. Bridge	123.12	12,00,000.00	1962
20	Poriem Bridge	Poriem (Satari)	R. C. C. Bridge	56.80	80,000.00	1968
21	Velus Bridge	Velus (Valpoi)	R. C. C. Bridge	36.00	2,00,000.00	1946
22	Morlem Bridge	Morlem	R. C. C. Bridge	20.00	58,000.00	1966
23	Querim Bridge	Querim	R. C. C. Bridge	30.00	2,00,000.00	1967
24	Ponda Bridge	Ponda	R. C. C. Bridge	16.00	91,970.00	1968
25	Candeapar Bridge	Candeapar	R. C. C. Bridge	94.00	10,67,000.00	1964
26	Bamangudo Bridge	Bamangudo (Molem)	R. C. C. Bridge	36.80	50,000.00	1942
27	Quepem Bridge	Quepem	R. C. C. Bridge	50.00	9,10,000.00	1963
28	Paroda Bridge	Paroda	R. C. C. Bridge	29.70	2,52,000.00	1966
29	Sanguem Bridge	Sanguem	R. C. C. Bridge	50.00	2,97,000.00	1966
30	Daucond Bridge	Daucond	R. C. C. Bridge	50.00	80,000.00	1963
31	Taripanta Bridge	Sanguem	R. C. C. Bridge	13.90	80,000.00	1969
32	Xelvona Bridge	Xelvona (Curchorem)	R. C. C. Bridge	30.50	2,50,000.00	1969
33	Ordofondo Bridge	Ordofondo	Steel Bridge	90.00	7,45,000 00	1962
34	Jawaharlal Nehru Bridge	Panaji	Prestressed Concrete	676.00	88,28,000.00	1970
35	Ragada Bridge	Ragada (Gangem)	R. C. C. Bridge	54.60	5,96,000 00	1971
36	Saleri Bridge	Saleri (Betul)	R. C. C. Bridge	43.38	3,50,000.00	1969
37	Gavthan Bridge	Gavthan (Sanquelim)	R. C. C. Bridge	20 00	19,000.00	1964
38	Godwal Bridge	Godwal (Sanguem)	R. C. C. Bridge	17.00	25,000.00	1966
39	Maem Bridge	Maem	R. C. C. Bridge	40.00	1,00,000.00	1946
40	Sirigao Bridge	Sirigao (Assonora)	R. C. C. Bridge	63.50	1,68,000.00	1971

In what follows is given a brief description of the minor ports in the district.

Panaji

Panaji port is located on the west coast of India, on latitude 50°30′ N and longitude 73°49′ E and lies at a distance of 4 kilometres from the mouth of the River Mandovi. It is a fair weather port. At the mouth of the River Mandovi, a natural sand bar exists which is known as Aguada Bar. The depth above chart datum is about 10 feet and Panaji is approached through this river. At present, passenger ships, sailing vessels and other crafts have to cross this bar to enter the port of Panaji and inland waterways. This bar requires to be dredged annually to maintain sufficient depth for the passenger and cargo traffic and is unapproachable during the foul season from 21st May to 15th September when all traffic is suspended. This port has not been connected with a railway station and the nearest railway to the port is situated at a distance of 45 kilometres by road.

For the development of this port, the existing jetty has been strengthened and extended. Another jetty has also been constructed near the Nehru Bridge (Mandovi Bridge), for the wharfage of sailing vessels and country crafts. A shed for passengers has also been constructed at the Panaji jetty. There are also jetties and ramps constructed at various ferry crossings for local traffic carried by the vessels of the River Navigation Department. The leading lights to Panaji port, Tejo, Reis Magos and Malim Lighthouses, have been modernised with new structures. Light buoys are expected to be fixed to mark the channel at the Aguada Bar. The marine workshop owned by the Government and situated on the opposite bank of the port, undertakes construction, repairs, etc., to Government owned ferries and launches. The total number of passengers embarked and disembarked at this port from coastal steamer passenger service during the year 1970-71 was 48,292 and 54,268 respectively. Besides, the number of passengers carried (local traffic) by the regular launch and ferry services, operated by the River Navigation Department during the year, were 59,77,305 including passengers both embarking and disembarking.

Import trade at this port consisted of jungle logs, furniture, tiles, shells, foodgrains, salt, etc. The total import during the year 1970-71 amounted to 9,897·198 metric tonnes. Liquor, fish, carbon papers, canned and fresh fruits and bamboos are generally the main items of export. The total export during the year 1970-71 was to the order of 371·391 metric tonnes.

Colvale

Located on the west coast of India on latitude 150°36·5′N and longitude 73°44′ E, at the entrance of the left margin of Colvale river,

Colvale port lies about 20 miles to the north of Panaji. The depth in the approach channel is about 5 feet at any tide. The river is navigable upto a distance of 25 kilometres from the port. This port is not approachable to big steamers even at high tide.

Local passengers and cargo at this port are transported by country crafts. Generally the port is visited by sailing vessels and fishing boats.

During the year 1970-71, dry fish, chunam powder, asphalt, shells, stone chips, grinding stones, castor oil and salt were the main items of import which was to the extent of 80·512 metric tonnes. Besides, 11,85,495 tiles were also imported during the year. The quantity of exports from this port during the same year stood at 39,000 metric tonnes and consisted mainly of fish and chunam shells. At present no facilities are available at this port for berthing and handling of the traffic.

Betul

The port of Betul is located on latitude 15°08·5′ N and longitude 73°57·2′ E at the entrance of the River Sal. It falls within the limits of Mormugao port. The depth in the approach channel is about 24 feet at high tide and 20 feet at low tide. The river is navigable for a distance of 20 kilometres from the port. Mostly fishing and sailing vessels call at this port. It is not approachable to big steamers and cargo vessels. There is a small mechanical ore loader at this port built by Messrs. Gosalia Shipping Private Limited, with a leading capacity of 500 tons per hour. There is a jetty where barges with a maximum length of 120 feet can come alongside for loading the bauxite ore which is either transported and discharged into ships anchored at some distance from the port, or at Mormugao harbour.

Local passenger and cargo traffic is carried by country craft licensed for this trade by the River Navigation Department as no ferries and launches are run by the department at this port.

Import consists mainly of tiles, coir, timber, fish, manure and salt. The total import at this port during the year 1970-71 was 2,101 metric tonnes. Dry and fresh fish, sand and bauxite ore form the main items of export. The export at this port during the same year was 49,191 metric tonnes.

Talpona

Talpona port is also located on the west coast of India on 14°59′N. latitude and 74°03′ E Longitude at the entrance on the left margin of the River Talpona, mid-way between the ports of Karwar and Mormugao. This port also serves the backward taluka of Canacona.

The river Talpona is navigable only upto a distance of 5 kilometres from the port. The depth in the approach channel is 5 feet during high tide. The port is not approachable to steamer and cargo vessels and is just a fair weather minor port.

Local passenger and cargo traffic is carried on in country crafts. No ferry or launch service is run by the Government. The port has no jetty. However, a natural facility for landing exists. The depth alongside this natural landing place is 9 feet approximately.

Tiles, cashewnuts, salt and onions are the items of import at this port. The total import during the year 1970-71 was 319·726 metric tonnes. Export consists mainly of logs, earthen pots and fresh and dry fish. During the year 1970-71, the total quantity of export came to 583 metric tonnes.

NAVIGATION

The Union Territory of Goa, Daman and Diu has a fine network of inland waterways which, in 1972, was navigable for approximately 218 miles with various minor ports namely Panaji, Colvale, Betul and Talpona located in the margins of Mandovi, Colvale, Sal and Talpona rivers, besides those at Daman and Diu. In the district of Goa itself, there are navigable rivers such as Mandovi, Agasaim, Zuari, Colvale, Sal, etc. As such, river navigation has become a familiar feature to Goans.

Around 1930, facilities for sea voyages to Bombay were provided from the Ports of Mormugao and Panaji by Killick Nixon and Company and by Mine Shipping Company. These services were provided twice a week and were extended upto Mangalore. It took 18 to 20 hours to reach Bombay from Goa. Every passenger was required to pay a tax of 10 annas to the Government of Goa besides the ticket. The system of internal navigation was under the management of Navigacao Flovial which was a section of the Navigation Department It had 8 steamships at its disposal. These steamships provided conveyance through the channel of navigation to the people from Panaji to Sanvordem ; Panaji to Volvoi ; Panaji to Aldona ; Panaji to Betim and Verem ; and Panaji to Mormugao. The steamship leaving Panaji for Sanvordem left at 11-00 a.m. and reached Sanvordem at 5-00 p.m. It touched Ribandar, Old Goa, Cumbarjua, Cundaim, Dongri, Marcaim, Undir, Durbate, Borim, Raitur, Manaqui and Sanvordem. It used to leave Sanvordem at 8-00 a.m. on the next day and reach Panaji around 2-00 p.m. However, the timings used to vary for three days after every fortnight. A fare of Rs. 2·50 was charged from Panaji to Sanvordem for upper class and 12 annas for lower class. Baggage used to be charged separately.

The steamship from Panaji to Volvoi used to leave Panaji around 4-30 p.m. and reach Volvoi around 7-30 p.m. It used to start on its return journey at 7-00 a.m. and reach Panaji at 10-00 a.m. It touched Ribandar, Old Goa, Querpin, Piligao and Surla. The fare for the upper class was Re. 1-00 while that for the lower class was 8 annas.

The third service, from Panaji to Aldona, used to leave Panaji at 4-45 p.m., touching Britona, Bando, Ecoshim, Pomburpa, Amadi and Calvim on the way. It used to reach Aldona at 6-30 p.m. It used to start for the return journey at 7-30 a.m. and reach Panaji at 9-00 a.m. Many a time this service did not halt at Banda, Amadi and Calvim. The fare from Panaji to Aldona was annas 8 and 4½ for upper and lower class respectively.

There used to be a ferry service run between Panaji and Betim and Verem at an interval of every one hour from 6-30 in the morning to 7-30 in the evening with a lunch break from 12-30 to 1-30 p.m.

The ferry from Panaji to Mormugao used to leave at 5-00 a.m. and reached Mormugao, touching Verem and Dona Paula, at 7-00 a.m. It used to leave for its return journey at 10-00 a.m. The next trip on the same route used to be in the evening. The fare charged between Panaji and Mormugao was Re. 1-10 annas for upper class and 5 annas for lower class.

At present the navigational activities are looked after by the Captain of Ports. There are ferry and launch services carrying passengers and cargo, to and from some of the ports, run by the River Navigation Department under the overall control of the Captain of Ports. The River Navigation Department known as Commercial Department gives essential utility service for safe carriage to passengers, vehicles and cargo, across the ferries in the waterways of Goa. The department maintains nine ferry services, namely Agasaim to Cortalim, Panaji to Betim, Colvale to Macasana, Ribandar to Chorao (Madel); St. Estevam to Tonca (Candola); Old Goa to Piedade; Siolim to Chopdem; and Pomburpa to Chorao; which are perrenial, while the one from S. Bras to Candolim plied except during the monsoon season.

The department maintained launch services from Panaji to Betim and Verem; Panaji to Aldona; Panaji to Naroa; and Panaji to Britona throughout the year, while the launch service from Dona Paula to Mormugao plies except during the monsoon season.

Besides launches owned by the River Navigation Department, the Captain of Ports Department owns four launches, one tug, three dredgers and one hopper barge. The launches are given on hire on payment

to persons desirous of taking a cruise in the Inland waterways of Goa. This facility is available at the port of Panaji only.

The following statement gives tonnage of vessels and finances of the River Navigation Department from 1965 to 1970 :

Serial No.	Item	1965	1966	1967	1968	1969	1970
1	Motor vessels (No.) ..	16	21	21	21	21	21
2	Gross tonnage ..	336	322	322	322	336	366
3	Finance (Rs. in lakhs)..						
	(i) Revenue .	11·39	11·53	9·96*	10·37	19·31	20·65
	(ii) Expenditure ..	10·28	18·16	12·03	11·15	18·44	17·94
4	Surplus or deficit ..	1·11	—6·63	—2·07	—0·78	+0·87	+2·71

* Relates to the period 1st April 1967 to 31st December 1967.

The number of vessels and their gross tonnage increased from 16 to 336 tonnes in 1965 to 21 and 336 tonnes respectively in 1970. The revenue and expenditure of the Department increased from 11·39 lakhs and 10·28 lakhs in 1965 to Rs. 20·65 lakhs and Rs. 17·94 lakhs in 1970 respectively. The statement below provides the extent of traffic along Mandovi, Zuari and Colvale rivers. The number of passengers travelling increased by about 57 per cent in 1970 as compared to that in 1965. Similarly, cargo carried during the period increased by about 40 per cent. Passenger cars and goods vehicles carriage increased from 92,000 in 1965 to 1,19,000 in 1970.

Traffic along Mandovi, Zuari and Colvale Rivers

Item	1965	1966	1967	1968	1969	1970
Total passengers (,000) ..	3,801	4,289	5,074	6,055	6,226	5,978
Of the 1st Class (,000) .	3	3	5	3	5	4
Of the 2nd Class (,000) ..	3,798	4,286	5,069	6,052	6,221	5,974
Cargo (,000 tonnes) .	5	6	6	6	8	7
Passenger cars and lorries (,000) ..	92	90	109	206	117	119

There are twelve important scheduled routes. The number of passengers travelling on these routes increased from 38·01 lakhs in 1965 to 62·26 lakhs in 1969, but declined to 59·78 lakhs in 1970. The decline in 1970 was due to the construction of the bridge across the Mandovi river which linked Panaji and Mapusa.

The following table gives the statistics regarding the number of main waterways and the total number of passengers along the river during the period 1965-1970 :

TABLE No. 2.—NUMBER OF MAIN WATERWAYS AND TOTAL NUMBER OF PASSENGERS ALONG THE RIVER.

Serial No.	Name of the River and Line	No. of passengers travelled (in '000)					
		1965	1966	1967	1968	1969	1970
	Fluvial lines along the Mandovi						
	Total ..	2,637	3,011	3,596	4,285	4,231	3,901
1	Panaji/Betim/Verem ..	130	121	169	122	74	36
2	Panaji/Britona/Ecoshim/Pomburpa ..	119	136	160	289	123	112
3	Cais dos Gujiras/Betim ..	2,235	2,217	2,728	3,376	3,484	3,209
4	Panaji/Britona/Ecoshim/Pomburpa/ Amberem/Calvim/Aldona	80	81	87	85	60	45
5	Panaji/Naroa (a) ..	61	114	128	124	124	82
6	Goa Velha/Piedade ..	10	191	177	182	248	272
7	Ribandar/Graca (Chorao) ..	.	53	62	107	118	145
8	Candola/Cumbarjua ..	..	98	85	..	..	..
9	Panaji/Old Goa ..	2	..	..	..	..	..
	Fluvial Lines along the Zuari						
	Total ..	1,163	1,278	1,478	1,769	1,995	2,077
10	Dona Paula/Mormugao ..	39	62	81	76	116	146
11	Agasaim/Cortalim ..	1,124	1,158	1,187	1,425	1,485	1,569
12	Borim (b) ..	..	..	..	..	117	136
	Fluvial Lines along the Chapora						
13	Colvale/Macasana ..	..	58	210	268	277	226
	Grand Total ..	3,800	4,289	5,074	6,054	6,226	5,978

Note.—(*a*) These lines are plied by the vessels of River Navigation Department for short periods of time once a year.

(b) Temporary launch service had been started due to damage of Borim Bridge.

Mormugao Harbour is one of the important national harbours of India. Cargo handled by this port increased from 67·4 lakh tonnes in the pre-Liberation period to 90·3 lakh tonnes in 1969-70, representing an increase of 34 per cent. The following statement gives intensity of increase in foreign and coastal trades during the pre-Liberation period and 1970-71.

Serial No.	Item	Pre-Liberation	1970-71	Percentage Increase
I.	*Foreign Trade* :			
	A. Steam vessels cleared ..	393	548	39
	(*i*) Number ..			
	(*ii*) Net Registered Tonnage (N. R. T.) (Lakh Tonnes).	16·7	41·9	151
	B. Sailing vessels cleared :			
	(*i*) Number ..	Nil	3	....
	(*ii*) N. R. T. (Tonnes) ..	Nil	279	....
II.	*Coastal Trade* :			
	A. Steam vessels cleared :			
	(*i*) Number ..	Nil	291	....
	(*ii*) N. R. T. (Lakh tonnes) ..	Nil	6·5	....
	B. Sailing vessels cleared :			
	(*i*) Number ..	66	1,010	1,430
	(*ii*) N. R. T. (Lakh Tonnes) ..	0·03	0·8	2,567

The number of steam vessels cleared also increased by about 39 per cent during the period. The net registered tonnage has increased by about 51 per cent. The coastal trade activity has also increased considerably.

SHIPPING

Goa is connected with Bombay by daily steamer service. However, it is suspended during the monsoon season.

During the 1930s, the Indian Co-operative Navigation and Trading Company Limited and the Bombay Steam Navigation Company Limited were plying regular daily services between Bombay and Mormugao except during the monsoons. During the monsoon, there was a weekly service to Mormugao. The following is an extract from the publication. ' An Illustrated Guide to Goa by Aquino Furtado ' which gives a vivid account of navigational facilities available in the district in the year 1922 :

" Goa lies some 200 miles by sea to the south of Bombay. The India Co-operative Navigation and Trading Co. Ltd., and the Bombay Steam Navigation Co. Ltd., help to keep a regular daily service between this port and that country, save in the monsoon, when there is only a weekly service direct to Mormugao. Leaving Bombay at 10-00 a.m., one can reach Pangim, the capital of Goa, within 20 hours. Several small stations delay the steamer on the way, affording to the traveller some change in the monotonous view of barren hills bordering the sea. Ratnagiri is the best of these, and lies midway, where a pleasant landscape with a majestic fortress on the top of the Miria hill greets the eye. A couple of stations further, comes Malwan noted for the Portuguese church and Shivaji's fort. Vengurla, further south, is the last British harbour and is famous for its hospital run by the American mission. There is also a Dutch factory there.

The Goan coast offers a pleasant change in the landscape. The eye may discern the Tiracol river separating Pernem from Sawantwadi. An old fortress guards the estuary. The river is only 14 miles long. Morgim, in the S. W. of the district of Pernem, is the first Portuguese harbour, but it is of small importance and few steamers call there, though it is convenient for the people living in the North of Bardez. It is at the entrance of the Chapora river. Chapora is also a village in Bardez noted for a fortress built in 1717. Anjuna follows and then Baga in the village of Calangute, a fine health resort in the hot season. The Royal Fortress of Aguada will not fail to attract the visitor's notice. Built in 1612, it is the largest fort, though now dismantled, in Goa, with several residential quarters, gaols (where Germans were interned during the late war), a chapel and some underground compartments, where the Portuguese took shelter in critical

times. The cylindrical tower on the face of the hill is the lighthouse which was first lit in 1864 on the birthday of Queen Maria Pia of Portugal. It has a brilliant rotating lantern of seven powerful lights visible at a distance of 26 miles and is the principal semaphoric station in Goa. The steamer rounds the Aguada point and passes from the Arabian Sea on the Mandovi, the most important river of Goa, so that the peninsula of Aguada formed by the Sinquerim river, becomes clearer to the view. Aguada Bay is one of the two principal anchorages of Goa capable of berthing the largest shipping; during the S. W. monsoon, however, it is virtually closed owing to high winds and sand bars in the estuary of the Mandovi. "

The sea-borne passenger profile conducted formerly by a private concern has now been nationalised and is now conducted by Mogul Lines, Government of India undertaking.

AIR TRANSPORT

The only airport in the district is located at Dabolim, a low laterite plateau, behind Marmagoa harbour, at a distance of about 25 kilometres from Panaji.

During the Portuguese regime, air-traffic was negligible. There was only one air service that connected Goa to Daman, Diu and Lisbon. During the year 1959, it had flown 7,223 passengers and a freight of 41,000 Kgs.

Air services in Goa started in February 1962 with a quota of three seats each on Bombay-Goa-Cochin and Cochin-Goa-Bombay flights, The growth of air traffic is reflected in the increased quota of seats which rose to 48 seats in 1966. In April 1968, Goa had a quota of 68 seats distributed between 48 seats on Viscount flights, exclusively between Goa and Bombay; 10 seats by Fokker Friendship to Cochin and another 10-seats by Fokker Friendship to Bombay. An additional flight is now operated—one trip of Dakota daily between Goa and Bombay during the peak months of March-June. The growth of passenger traffic shows that air traffic is popular specially between Goa and Bombay on account of convenience and reasonable charges. The air journey between Goa and Bombay takes just an hour as against a tiring journey by rail or road of about 24 hours.

The number of passengers travelling by air rose to 20,473 in 1968-69 as against 16,164 in 1967-68, an increase of about 27 per cent. The freight traffic increased to 2,01,049 kilograms in 1967-68 as against 31,557 kilograms in 1962-63, a rise of about 45 per cent per annum. In the same period, mail traffic increased by 13,612 kilograms. This

growth is an indication that Goa has a promising potential for air traffic development in future, particularly because of its location and slow rail link.

The following statement gives the growth of air traffic in Goa :

Year	Number of passengers	Excess baggage (Kg.)	Mail (Kg.)	Freight (Kg.)
1962-63	7,567	7,220	30,100	24,337
1963-64	10,355	9,701	27,063	24,273
1964-65	25,527*	21,347	34,801	23,446
1965-66	14,824	14,076	46,301	28,821
1966-67	15,551	14,823	45,998	1,50,445
1967-68 . ..	16,164	15,712	43,712	1,85,337
1972-73	31,972 (+728)**	N.A.	N.A.	N.A.

*The increase in the passenger traffic this year was due to the exposition of the body of St Francis Xavier, when visitors from abroad and India flocked to Goa.

**Children.

TOURIST FACILITIES

The district of Goa which used to receive a handful of tourists prior to Liberation, today attracts more than a lakh of tourist from all over the world, every year. This has naturally called for necessary facilities in the form of accommodation, catering, transport, recreation, etc. With a view to facilitating sight-seeing for tourists, the Government has arranged for conducted sight-seeing tours to different objects of interest in the district. Similarly, arrangement for lodging the tourists has been made in the Tourist Hostel at Panaji with 41 modern and comfortable rooms, a conference hall, an attached restaurant and shop of tourists' utility. The programme of beautification of Miramar, Campal zone, is completed and the Children's Park was inaugurated in November 1972. Two tourist cottages have been completed at Bondla and an agricultural garden laid out. Work on the pergolas at Diwar hillock are completed. A two-storeyed Tourist Resort with

20 rooms, a dancing hall and a restaurant has been constructed on the Calangute beach. Tourist cottages have also been constructed at a number of other beaches. A picnic spot has been developed at Maem lake. Row boating at Maem and launch cruises in the Mandovi river have been started.

In 1971, 1,10,000 tourists visited Goa. They were provided with transport facilities, especially in the form of conducted tours, accommodation, etc. About 15,000 tourists took advantage of the conducted tours organised by the Government in 1971.

Besides making arrangements for the tourists coming to Goa, the Government also makes arrangements for conducted tours outside Goa to Delhi, Kashmir, Mahableshwar, etc.

Rest Houses

In the district, the Government does not maintain any rest houses for the officials or the tourists excepting the Circuit House at Panaji However, the Government have constructed the Tourist Hostel at Panaji, the Tourist Resort at Calangute and some tourist cottages all over the district. There are a few forest bungalows located at Morlem, Querim, Valpoi, Poinguinim, Quepem, Sanguem and Ponda. They are maintained by the Forest Department. Besides rest houses maintained by the Government, a number of tourists can be accommodated at *agrashalas* attached to different temples in the district.

POSTS AND TELEGRAPHS

The Postal Services were first introduced in the district in 1798. Prior to that, postal communications to Portugal and their colonies was either through faithful travellers or through closed bags sent by merchant ships. They were charged at the rate of 12 annas per ounce. The communications addressed to Mozambique, Macao, Daman and Diu were charged at 2 annas and 1 anna. An agreement was reached with the then British Government of India in 1833 and postal communications were introduced between Goa, Belgaum and Malvan. The postal department was formally established in 1823. The postal communications to be sent to the British territories were charged as per the distances and about 3 to 4 paise were to be paid to the Government of Goa per tola. Communications weighing over 36 tolas were not accepted. In 1838, was introduced, the postal service from Vengurla. Post to Portugal was sent via Alexandria twice a month. It was sent thrice a month from 1859, four times a month from 1868

and five times a month from 1875. The post to British India was sent daily from 1868. The postal stamps printed in Portugal were first used in 1871. From 1877 onwards, the postal stamps were printed in Goa. The postal services of Goa became a part of the International Post Organisation by the Congress at Berne in 1874. The postal service through steam launches upto Sanvordem and delivery of parcels were also introduced in due course. Local cards were charged at a paisa each, and cards to be sent to British India were charged an anna each. These cards were available from 1892 onwards. The postal services were improved in 1902, 1915 and 1920. In 1843, was introduced the telegraph services at Panaji, Cabo, Reis Magos and Aguada. Panaji was connected to Vengurla and Belgaum in 1858 by the British Government. Jose Nicolau da Fonseca has to say the following about Telegraph and Post Offices at that time, in his book, "Sketch of the City of Goa" published in 1878.

"There is only one telegraph office in Goa, at Pangim, the capital of the country, maintained jointly by the British and Portuguese Government, the latter contributing yearly the sum of Rs. 160, besides paying £3 monthly as house-rent. During the year 1874-75, the total number of messages sent was 1,294, and of those received, 1,869. The total receipts amounted to £256-11-6¼. The headquarters of the Post Office are also at Pangim but it has some branches established at Margao, Mapusa, Ponda, Bicholim, Chinchinim and Pernem. Letters sent from Goa to any part of British India, or *vice-versa,* bear respectively the postage stamps issued by the Portuguese and English Governments. The delivery of letters in Goa is made by a staff of carriers paid by the local Government. The total receipts were in 1876, £1,114-2-11.".

In 1875, the then Government thought of suspending the services but the services were continued as the Government of Goa promised the British Government to pay a sum equivalent to 1,638 *asalfas* every year. In 1911, the Goa Government agreed to pay Rs. 250 per year towards the rent of the telegraph offices. By that time, the then West Indian Portuguese Railway arranged for telegraphic communications at all the stations and as such the telegraph office at Panaji was connected to Mormugao Railway Station. In 1895, as a result of the revolt of Dada Rane, the Government of Goa thought of establishing their own telegraph services and 4 offices with headquarters at Panaji, Ponda, Valpoi and Sanquelim were established in 1898. In the initial stages, the administration of telegraph services was vested in P. W. D. In 1916, the telegraph and telephone department of the P. W. D. was merged with the postal department. In 1885, the Post Office at Panaji which was under the control of the British Government was transferred to the Government of Goa.

Subsequently, railway mail service was also introduced. By 1930, there were in the district 72 post offices of which 34 were combined post and telegraph offices. The postal savings banks were established in 1916.

The internal telegrammes in Goa were charged at the rate of annas 8 for the first 12 words for ordinary telegrammes and at Rs. 1 for urgent telegrammes. Those telegrammes sent through the railway stations or sent to the places then in British India were charged at the rates prevailing in British India. Money orders were not delivered at the residence of the addressee but the addressee was required to collect the amount from Regedores of the Concelho. V. P. Parcels and such other matters were required to be collected from the post office by the addressee himself.

The postal department was headed by the Director who was assisted by the sub-Director. The heads of different Post Offices were known as Chiefs. The appointments of the Director and Sub-Director were made by the personnel from Portugal, while those of other officers were made by the Government of Goa through competitive examinations. The Director of Postal Services was paid a salary of about Rs. 5,500 per month.

At present, the Posts and Telegraphs department maintains a number of Post Offices in the district with the head Post Offices being located at Panaji and Margao. These Post Offices are divided into sub-Post Offices or Branch Post Offices and Combined Offices which combine in them both the post and telegraph operations. The departmental telegraph office is located at the head office at Panaji which controls the telegraph traffic of the Combined offices of the district. The Combined Offices undertake the telegraph business during the restricted hours. The Panaji D. T. P. remains open for 24 hours and also accepts messages written in Devnagiri script.

Taluka-wise list of Post Offices with break-up of Sub-Offices, Branch Offices and Combined Offices is given in Appendix 19.

The number of post offices and letter boxes increased from 81 to 219 in pre-Liberation period to 142 and 555 respectively in 1971-72 which shows 75 per cent and 154 per cent increase respectively. The number of telephone sets increased from 548 in the pre-Liberation period to 2,968 in 1971-72. The number of telephone exchanges increased by two and a half times while the number of public call offices increased by five and a half times between 1963-64 and 1971-72.

In what follows is given (Table 3) the estimated number of post cards, letters, newspapers, parcels and packets in Goa and (Table 4) number of telegraph offices, telephones and public call offices.

TABLE No. 3—ESTIMATED NUMBER OF POSTCARDS, LETTERS, NEWSPAPERS PARCELS AND PACKETS IN GOA AS ON 31ST MARCH.

Item	1968-69	1969-70	1970-71	1971-72
1. Postcards	23,55,880	26,88,550	15,70,000	1,68,54,184
2 Letters :				
(a) Paid and Service ..	1,47,87,350	1,52,66,524	1,60,00,000	2,80,39,728
(b) Unpaid	35,890	38,556	35,000	15,586
(c) Registered ..	3,75,100	4,15,200	4,18,760	4,83,571
(d) Insured	2,945	3,127	2,900	3,920
(e) Value Payable ..	7,890	8,690	2,160	4,091
Total—Letters and Postcards.	1,75,58,055	1,84,20,647	1,80,28,820	4,54,01,080
3. Newspapers	7,50,180	8,16,254	9,00,000	8,39,768
4. Parcels :				
(1) Registered :				
(a) Ordinary ..	12,275	13,950	25,000	19,016
(b) Insured ..	1,520	1,650	1,000	917
(c) Value Payable ..	850	1,020	1,020	338
(2) Unregistered ..	1,66,800	1,96,500	1,00,000	69,012
Total—Parcels ..	1,81,445	2,13,120	1,27,020	89,303
5. Packets	14,15,800	15,23,900	N.A.	15,57,536
6. Postal orders sold and paid:				
(a) Number ..	28,839	29,499	25,250	21,744
(b) Value (Rs.) ..	1,94,834	1,90,325	1,49,450	1,70,459

ALL INDIA RADIO

Panaji Station of All India Radio started functioning from January 9, 1962, within three weeks of the Liberation of Goa, as the successor to *Emissora de Goa* which was on the air from 1948 and which was then under the management of the Posts and Telegraphs department.

The set-up operating when the AIR took over, underwent improvements from time to time. At present there is a set-up of modern centrally air-conditioned studios with a central control room, facilities for dubbing, listening and rehearsals. The Panaji station of AIR has two channels. Channel A carries programmes in Konkani, Marathi, English and Portuguese, and news bulletins, etc., and is given on the new transmitter inaugurated on May 19, 1969. Channel B gives the programmes under Vividh Bharati service on a transmitter

TABLE No. 4.—NUMBER OF TELEGRAPH OFFICES, TELEPHONES AND AND PUBLIC CALL OFFICES

Taluka	Telegraph Offices		Telephones in use				Telephone Exchange		Public Call Offices	
			Main		Extra					
	1971	1972	1971	1972	1971	1972	1971	1972	1971	1972
1	2	3	4	5	6	7	8	9	10	11
Tiswadi	8	10	866	1,073	405	86	1	1	8	12
Salcete	16	16	N.A.	632	N.A.	146	2	2	6	10
Bardez	10	11	166	203	10	1	2	2	6	4
Mormugao	4	4	N.A.	558	N.A.	204	2	2	4	3
Ponda	3	3	91	120	....	2	1	....	2	2
Bicholim	2	2	75	51	....	....	2	1	2	2
Pernem	1	1	2	....	N.A.	....	....	....	1	1
Quepem	3	3	N.A.	183	N.A.	6	1	1	1	3
Canacona	1	1	N.A.	....	N.A.	....	....	....	1	1
Satari	1	1	N.A.	....	N.A.	N.A.	....	....	1	1
Sanguem	1	1	N.A.	19	N.A.	....	1	1	1	1
Goa District	50	53	N.A.	2,839	N.A.	N.A.	12	10	33	40

started in July 1971. Both the transmitters provided the primary broadcast coverage for the entire territory of Goa. The radio station has a very good collection of discs and tape recorders in its library. The auditorium of the AIR Panaji, accommodates about 150 persons comfortably.

This station gives programmes essentially in Konkani and Marathi. The English programmes, specially the western music, have a wide listening. There is a weekly half-hour programme in Portuguese. As in other broadcasting units, at this station also, music takes the pride of place. Hindustani classical and light music receives a lot of attention as also Marathi Natya Sangeet, Bhavgeet, etc. Konkani music in folk tunes and adaptation of western tunes take a general share. Konkani light music in Hindustani style also receives encouragement. Every effort is made to cater to the heavy demand for western light music. Young musicians in western and Indian styles of singing are given adequate opportunities. Records from other regions of India and western countries are also procured and broadcast.

Apart from music, talks, interviews, discussions, plays and features specially audience programmes for agriculturists, women, children and youth are also broadcast. Emphasis is always laid on youth programmes with a view to encouraging youth to speak their minds on all matters, controversial and non-conventional, and the radio forum is adequately used by the young generation of both sexes in Goa.

Sports commentaries with special reference to football, and eye witness accounts of the various pageantries like flag hoisting on national days, aquatic events, evinces a keen interest of the listeners of Panaji station of AIR. The station originates news bulletins in Konkani and relays important central news bulletins in English, Hindi and Marathi. The two Konkani bulletins from Bombay are also relayed by the AIR, Panaji. Important events are covered in radio reports, running commentaries and news reels.

The diary of the daily programmes of the AIR is published in Akashwani as also in all local dailies.

COMMUNITY LISTENING RADIO SETS

The Community Listening Scheme was introduced in this territory in October 1963 with a view to giving wide publicity to Governmental activities in rural areas and to keeping the public in general informed of the Government policies and its execution.

The sets are supplied to the village panchayats free of charge and are allowed to be tuned in only to the Panaji station of All India

Radio. According to the terms and conditions governing the supply of sets, these are to be tuned for about two to two and a half hours daily, to listen to the programme covering fields of agriculture, fisheries, education, industries, co-operative societies, etc. Installation, maintenance, inspection and repairs of the sets are carried out by the Directorate of Information and Tourism free of charge, for which it maintains a Community Listening Unit consisting of one store-keeper and three radio mechanics.

The following statement gives the taluka-wise list of villages in the district of Goa where the Community Listening Sets have been installed, as in July 1972.

Pernem Taluka: 1. Mandrem, 2. Parcem, 3. Agarvado, 4. Arambol, 5. Uguem, 6. Caznem, 7. Uguem (Co-operative Society), 8. Cansarvornem, 9. Vazri, 10. Chandel, 11. Morgim, 12. Tuem, 13. Virnora, 14. Querim, 15. Tiracol, 16. Paliem, 17. Corgao, 18. Alorna, 19. Hassanpur, 20. Torxem, 21. Tamboxem, 22. Dargalim.

Bardez Taluka: 1. Salai, 2. Revora, 3. Siolim, 4. Aldona, 5. Candolim, 6 Pilerne, 7. Parra, 8. Britona, 9. Pirna, 10. Oxel, 11. Pomburpa, 12. Betim-Verem, 13. Nerul, 14. Verla, 15. Bastora, 16. Assonora, 17. Ucassaim, 18. Assagao, 19. Saligao, 20. Moira, 21. Socorro, 22. Arpora, 23. Colvale, 24. Calangute, 25. Anjuna 26. Tivim, 27. Guirim, 28. Camurlim.

Bicholim Taluka: 1. Piligao, 2. Naroa, 3. Carapur, 4. Sarvona, 5. Pale, 6. Velguem, 7. Maem, 8. Amona, 9. Mulgao, 10. Sirigao, 11. Surla, 12. Cudnem, 13. Latambarcem, 14. Adwalpale, 15. Dumacem, 16. Mencurem.

Satari Taluka: 1. Codal, 2. Caranzol, 3. Pisurlem, 4. Guleli, 5. Pikul, 6. Querim, 7. Maulinguem, 8. Birondem, 9. Onda, 10. Saleli, 11. Poriem, 12. Ponsuli.

Tiswadi Taluka: 1. Batim, 2. Curca, 3. Talaulim, 4. Neura, 5. Mandur, 6. Cumbarjua, 7. St. Matias, 8. St. Andre, 9. Pale, 10. Chimbel, 11. Chorao, 12. Madel, 13. St. Estevam, 14. Carambolim, 15. Corlim, 16. Talegao, 17. St. Lourence.

Ponda Taluka: 1. Vadi, 2. Telaulim, 3. Volvoi, 4. Santeribhatwado, 5. Boma, 6. Banastarim, 7. Betqui, 8. Candola, 9. Verem, 10. Vagurbem, 11. Ponchavadi, 12. Siroda, 13. Cundaim, 14. Borim, 15. Queula, 16. Bandora, 17. Marcaim, 18. Priol, 19. Cuncoliem, 20. Querim, 21. Tivrem, 22. Orgao, 23. Betora, 24. Nirangal, 25. Curti, 26 Candeapar, 27. Usgao, 28. Durbate, 29. Durbate-Balwadi.

Salcete Taluka: 1. Ambelim, 2. Orlim, 3. Curtorim, 4. Benaulim, 5. Loutulim, 6. Betalbatim, 7. Carmona, 8. Paroda, 9. Dramapur, 10. Chandor, 11. Cavelossim, 12. Nesai, 13. Assolna, 14. Velim,

15. Sarzora, 16. Chinchinim, 17. Navelim, 18. Aquem, 19. Macasana, 20. Davorlim, 2. Colva, 22. Majorda, 23. Verna, 24. Cuncolim.

Sanguem Taluka: 1. Netorlim, 2. Bati, 3. Calem, 4. Curdi, 5. Curpa, 6. Rivona, 7. Zambaulim, 8. Sancordem, 9, Muguli, 10. Darbandora, 11. Colem, 12. Sigao, 13. Quirl-pal, 14. Dabhal.

Quepem Taluka: 1. Fatorpa, 2. Molcornem, 3. Deao, 4. Bali, 5. Xelvona, 6. Sirvoi, 7. Barcem, 8. Quedem, 9. Bali, 10. Ambaulim, 11. Xeldem, 12. Cacora, 13. Curchorem, 14. Avedem, 15. Cotombi.

Canacona Taluka: 1. Cola, 2. Gaodongrem,' 3. Cotigao, 4. Poinguinim, 5. Galgibaga, 6. Talpona, 7. Loliem, 8. Nagorcem, 9. Quindlem, 10. Agonda, 11. Shristhal, 12. Shristhal-Temple.

Mormugao Taluka: 1. Cansaulim, 2. Chicalim, 3. Sancoale, 4. Velsao, 5. Cortalim.

BROADCASTING LICENCES

The broadcasting licences issued in the district has gone up from about 18,763 in 1964-65 to 65,775 in 1971-72, an increase of 250 per cent over seven years. Particularly the broadcasting licences of receiving sets for domestic purposes has risen significantly while the other items like community and cheap radios show a slow growth.

The following table gives the number of broadcasting licences issued from 1964-65 to 1971-72 :

TABLE No. 5—BROADCASTING LICENCES ISSUED FROM 1964-65 TO 1971-72

Item	1964-65	1965-66	1966-67	1967-68
Domestic	18,307	13,017	17,845	20,436
Community	83	88	62	60
Schools	8	11	9	12
Cheap radios	8	18	71	84
Commercial	283	110	206	228
Demonstration licences ..	74	57	10	12
Total ..	18,763	13,301	18,203	20,832

Item	1968-69	1969-70	1970-71	1971-72
Domestic	28,673	30,545	41,691	64,962
Community	74	78	166	133
Schools	13	15	8	15
Cheap radios	360	387	475	422
Commercial	252	234	135	232
Demonstration licences ..	31	35	12	11
Total ..	29,403	31,294	42,487	65,775

CHAPTER 8—MISCELLANEOUS OCCUPATIONS

INTRODUCTION

Agriculture, industry, trade and commerce and transport provide avenues of employment to the majority of the population. However, a large portion of the working population of the district remains uncovered in the category as earners listed above. A glance at both the urban and the rural life would depict that certain means of livelihood come neither directly under the purview of industry nor under agriculture or other economic activities mentioned above. Most of them are in the form of services and sales essential to maintain a certain standard of living. Generally they constitute personal services. All such economic activities have been grouped and described in this chapter, Miscellaneous Occupations. These occupations are considered miscellaneous because there is no uniform pattern in regard to their nature, operation, economic structure, etc. and these occupations cater to the daily needs of the people. Changes in the essential structure like break-up of the joint family system, a sense of decent living and economic stability, free movement of labour, change in habits and likings have provided a good chance for the structure of miscellaneous occupations to create a position of its own in the socio-economic field. A number of needs which were formerly satisfied at home in the family are now to some extent efficiently satisfied outside. Specific mention in this regard may be made to hotels and restaurants, boarding houses, manufacturers of instant food stuffs and ready-made garments, laundering, tailoring, etc. The number of persons engaged in public administration is also on the increase, consequent upon the expansion of the Governmental activities. The grinding wheel has been replaced by flour mills.

The occupations described in the following pages, amongst others, include hotels, restaurants, lodging houses and inns, bakeries, flour mills, watch repairing, radio repairing, etc., bicycle hire and repair services, public administration, laundering and domestic service.

PUBLIC ADMINISTRATION

With the Liberation of the territory, the concept of Government has changed to a welfare state from that of a police state. The Governmental activity during the Portuguese rule was confined to the protection of Portuguese interests in the district. With the Liberation of the territory, the concept of a welfare state which was already adhered to by the Government of India in the rest of the country, became applicable to the territory. This gave rise to the increase in the number of persons employed in public administration due to the numerous developmental activities taken up by the Government. Included in this category are the employees of the Central Government working in the district; employees of the Local Government or the Government of the Union Territory of Goa, Daman and Diu; employees in public enterprises and statutory and semi-Government organisations under the Government of India, and employees in public enterprises and statutory and semi-Government organisations under the Government of Goa, Daman and Diu.

Employees of the Central Government

As per the Census of Government Employees for the Union Territory of Goa, Daman and Diu as on March 31, 1972, there were in the entire territory, 2,525 employees of the Central Government. Majority of them are working in the district of Goa. Of these 2,401 were regular employees and 124 were non-regular employees. From this it can be seen that the total number of Central Government employees which was 1,451 in 1963 had shot upto 2,525 in 1972. It represented an increase of 57·46 per cent.

Employees of the Local Government

The total number of employees in the district of Goa under the Government of the Union Territory of Goa, Daman and Diu in 1963 stood at 8,463 including 7,845 regular employees and 618 non-regular employees. Of the regular staff, 338 were gazetted and 7,505 were non-gazetted. This gave the ratio of 22 non-gazetted employees per gazetted officer. The number of Government employees both regular and non-regular had almost doubled by March 1972. By then, there were in the district, 16,142 Government employees including 15,340 regular employees and 802 non-regular employees. Of the regular employees, 588 were gazetted and 14,752 were non-gazetted. This gave the ratio of 25 non-gazetted employees per gazetted officer.

The following statement gives the distribution of the regular employees of the entire territory by total emoluments for the years 1963 and 1971-72.

Total Emolument Ranges (Rupees)	Number of Employees	Percentage to the total	Number of Employees	Percentage to the total
	1963	1963	1971-72	1971-72
Below 75	90	1·07	9	0·06
75 to 99	336	3·98	16	0·10
100 to 149	3,409	40·43	84	0·55
150 to 199	1,555	18·44	3,391	22·11
200 to 299	1,726	20·47	6,479	42·24
300 to 399	518	6·14	2,483	16·19
400 to 499	350	4·15	1,478	9·64
500 to 749	282	3·35	1,013	6·60
750 and above	166	1·97	387	2·51
Total ..	8,432	100·00	15,340	100·00

Deputationists

With the liberation of the Territory, it was thought prudent by the Government to conduct the local administration with the help of deputationists from other states since there was no staff trained in the pattern of administration that existed in the rest of the country. Accordingly, the services of a number of Central Government and State Government employees were placed at the disposal of the Government of the Union Territory of Goa, Daman and Diu. They are classified as deputationists. For the entire territory of Goa, Daman and Diu, in 1963, the number of deputationists stood at 768 including 61 gazetted and 707 non-gazetted staff. With the local staff getting trained, the number of deputationists has decreased and by the end of March 1970 it stood at 137 including 73 gazetted and 64 non-gazetted employees.

The following statement gives the number of deputationists from 1963 to 1965 and 1965-66 to 1969-70 :—

Year	Gazetted	Non-Gazetted	Total
1963	61	707	768
1964	57	497	554
1965	86	853	939
1965-66	82	214	296
1966-67	77	161	238
1967-68	81	120	201
1968-69	81	106	187
1969-70	73	64	137

Employees in Public Enterprises and Statutory and Semi-Government Organisations under the Government of India

The number of employees coming under this category include the employees working in all the branches of the State Bank of India, Mormugao Port Administration, Mineral and Metal Trading Corporation and the Life Insurance Corporation of India. The number of regular employees in this category in 1963 stood at 1,276. By the end of March 1970, it had risen to 2,925 showing a rise of 129·23 per cent during the period. By the end of March 1970, there were under the category 2,925 employees of whom 148 were officers and 2,777 were other staff. The following statement gives the organisation-wise break-up of these employees as on March 31, 1970 :—

Organisation	Officers	Others	Total
State Bank of India	48	318	366
Port Administration	78	2,260	2,338
Mineral and Metals Trading Corporation ..	9	162	171
Life Insurance Corporation of India ..	13	37	50
Total ..	148	2,777	2,925

The following table gives the distribution of employees under the category according to total emoluments.

TABLE No. 1—DISTRIBUTION OF EMPLOYEES IN PUBLIC ENTERPRISES, STATUTORY AND SEMI-GOVERNMENT ORGANISATIONS UNDER GOVERNMENT OF INDIA AS ON 31ST MARCH, 1970.

Total Emolument Ranges (Rupees)	Organisations				
	State Bank of India	Port Administration	Minerals and Metals Trading Corporation	Life Insurance Corporation of India	Total
Below 75 ..	6	6	..	..	12
75 to 100	1	2	..	..	3
100 to 150	1	22	..	..	23
150 to 200	7	898	25	1	931
200 to 300	87	714	22	9	832
300 to 400	131	470	74	13	688
400 to 500 . ..	56	99	21	6	182
500 to 750	26	74	20	18	138
750 to 1,000	29	30	6	1	66
1,000 to 1,500	19	18	2	1	40
1,500 and above ..	3	5	1	1	10
Total ..	366	2,338	171	50	2,925

Employees in Public Enterprises and Statutory and Semi-Government Organisations under the Government of Goa, Daman and Diu

The Census of Employees under this category covered in 1963, Caixa Economica de Goa, 13 municipalities, 224 comunidades and 159 village panchayats in the entire territory. The number of employees excluding casual labour during that year, stood at 698. The Census as on 31st March, 1970, included municipalities, Caixa Economica de Goa, Social Welfare Advisory Board, Project Implementing Committee, Institute of Public Assistance, Industrial Development Corporation, the Board of External Trade and the Goa State Co-operative Bank Limited, — Semi-Government Organisations throughout the territory. The total number of employees excluding casual labour which was 698 in 1963, rose to 1,224 by the end of March 1970, representing an increase of 75·36 per cent.

The following statement gives the distribution of employees excluding casual labour, according to total emoluments :—

Total Emolument Ranges (Rupees)	Number of employees 1963	Percentage on total 1963	Number of employees 1969-70	Percentage on total 1969-70
Below 75	55	7·9	5	0·4
75 to 100	29	4·2	7	0·5
100 to 150	230	33·0	282	23·1
150 to 200	45	6·4	372	30·5
200 to 300 . ..	152	21·8	289	23·6
300 to 400	119	17·1	130	10·6
400 to 500	36	5·0	90	7·3
500 and above	32	4·6	49	4·0
Total ..	698	100·0	1,224	100·0

LEARNED PROFESSIONS

Teachers

The teachers play an important role in the life of the District. In 1962-63, there were 2,567 teachers in schools in the Territory of Goa, Daman and Diu. Out of them 1,468 were in primary schools, 433 in middle schools and 666 in secondary schools. In 1972-73, their total number had increased to 6,480 and at primary, middle and secondary schools there were 2,995, 1,738 and 1,747 respectively. The following table shows their number from 1968-69 to 1971-72.

TABLE No. 2—Number of Teachers

Type of Education		1968-69	1969-70	1970-71	1971-72
1		2	3	4	5
A—General Education—					
1. University Department..	Male	5	5	11	14
	Female	....	....	1	1
	Total	5	5	12	15
2. Colleges	Male	152	156	157	167
	Female	33	42	46	43
	Total	185	198	203	210
3. High/Higher Secondary Stage Education	Male	643	715	872	1,012
	Female	392	457	467	565
	Total	1,035	1,208	1,339	1,577
4. Middle (Non-basic) Schools Stage Education	Male	803	818	840	903
	Female	627	645	641	721
	Total	1,430	1,463	1,481	1,624
5. Primary (Non-Basic) Stage Education	Male	1,489	1,534	1,451	1,307
	Female	1,422	1,495	1,595	1,418
	Total	2,921	3,029	3,046	2,725
6. Nursery Schools	Male	....	N.A.	....	....
	Female	161	N.A	143	104
	Total	161	N.A.	143	104
Total—Number of Teachers in Institutions for General Education	Male	3,092	3,264	3,331	3,403
	Female	2,645	2,639	2,893	2,852
	Total	5,737	5,903	6,224	6,255
B—Professional, Technical and Special Education—					
1. Engineering College ..	Male	8	8	27	28
	Female	....	1	1	1
	Total	8	9	28	29
2. Commerce College ..	Male	15	19	13	17
	Female	3	3	5	3
	Total	18	22	18	20
3. College for Medicine ..	Male	52	61	46	45
	Female	12	25	22	27
	Total	64	86	68	72
4. Pharmacy College ..	Male	30	31	31	33
	Female	2	2	3	2
	Total	32	33	34	35
5. Teachers' Training College	Male	52	61	46	45
	Female	12	25	22	27
	Total	64	86	68	72
6. Polytechnic School ..	Male	20	25	21	19
	Female	....	....	....	....
	Total	20	25	21	19
7. Teachers' Training Schools	Male	11	13	17	19
	Female	7	1	7	6
	Total	18	14	24	25

TABLE No. 2—*contd.*

Type of Education		1968-69	1969-70	1970-71	1971-72
1		2	3	4	5
8. Technical School ..	Male	....	47	47	38
	Female	N.A.	10	12	8
	Total	....	57	59	46
9. *Centres for Social (Adult)* Education.	Male	N.A.	N.A.	N.A.	58
	Female	N.A.	N.A.	N.A.	24
	Total	134	26	66	82
Total—Number of Teachers in Institutions for Professional Technical and Special Education	Male	N.A.	N.A.	N.A.	263
	Female	N.A.	N.A.	N.A.	77
	Total	302	381	328	340
Grand Total—(All Teachers)	Male	N.A.	N.A.	N.A.	3,666
	Female	N.A.	N.A.	N.A.	2,929
	Total	6,039	6,184	6,552	6,595

Doctors

During the year 1971-72, there were 600 doctors engaged in the medical profession in the district of Goa. The statement that follows gives taluka-wise, the number of doctors in the district.

Taluka	No. of Doctors
GOA DISTRICT	600
Tiswadi	237
Salcete	145
Bardez	88
Mormugao	46
Ponda	22
Bicholim	19
Pernem	11
Quepem	13
Sanguem	6
Canacona	6
Satari	7

DOMESTIC AND PERSONAL SERVICES

Domestic Servants

A considerable number of persons are employed in domestic services. Many families belonging to middle classes and high income groups employ domestic servants for performing specific jobs like cleaning utensils, washing clothes, etc. or they are full-time employees of the household. Many a time they are provided with meals too. The major portion of these domestic servants were of the fair sex. The domestic servants have no uniform rates of wages. However, they may get Rs. 30 to 50 per mensum. Those who find it difficult to

employ a full-time servant, engage a part-time servant, and such servants get Rs. 10 to 25 per month. Expert cooks and servants employed in hotels and restaurants get higher wages.

BARBERS (Mhale)

The hereditary barbers of the district are known as *mhale*. The exact number of barbers in the district is not available. A number of hair-cutting saloons are also found all over the district. In case of big saloons. the owners employ hired barbers. They are paid wages on monthly or daily basis on piece rate system. Formerly, these barbers used to move from door to door and were paid usually in kind. Nowadays, all the barbers receive their emoluments for the services rendered in cash. The usual charge for a hair-cut for an adult is Re. 1 and that for a shave 25 to 30 paise. The rate differs from shop to shop. In villages, the charge for a hair-cut is seventy-five paise and that for a shave 20 paise. It is found that some of the barbers specially in villages still attend to their clients at their houses, even if they have their own barber shops. The big hair-cutting saloons are usually found to be well equipped with furniture, light and fans, radio sets and in a few cases, mechanical appliances. It is noticed that one of the shops of Panaji town charges Rs. 7 for a hair cut including shave. The charges of the barber varied from Re. 1 to Rs. 7 in the urban areas.

A number of female hairdressers are found in the urban areas. The women folk of the rural area who want to trim their hair have to visit a saloon in an urban area. These hairdressers, besides trimming hair, also shampoo and set the hair in styles currently in fashion.

The barber's business has now slackened, as it is witnessed, particularly amongst the youth, to have long Beatle type hair-do. The tools and equipment required by barbers are a few pairs of scissors, a razor and cropping machines, while at the ladies hairdressers, besides combs and brushes and pairs of scissors, can also be seen, shampoo, hairpins, hair nets and setting lotion.

A few of the establishments have revolving chairs and dressing tables with mirrors attached. Barbers have organised their own Unions to safeguard their interest.

WASHERMEN (Madval, Dhobi)

The occupation of washermen is a hereditary occupation and the washermen are known as *madval*. The services of washermen are absolutely essential for the people of the urban as well as rural areas alike. Many of the washermen attend to their clients at their homes.

Laundries are a common feature in the urban areas and are helpful not only to the local people, but also to tourists. These laundries undertake the work of washing and ironing clothes and at times, darning and dyeing, too. The actual washing is done outside while the ironing is done in the laundries. The owners of the laundries engage washermen for washing and ironing clothes. Usually, a division of labour is witnessed in respect of washermen, their womenfolk doing the work of washing the clothes and the men doing the work of ironing. In the accessories used for the washing and ironing of clothes can be included soap, bleaching powder, starch, indigo and tinopal for the purpose of washing, and charcoal, firewood and electric energy for ironing.

TAILORING AND READY-MADE GARMENTS

The tailor has since long been an important constituent of the society. The higher standards of dress adopted by the people and the ever changing trends of the present day fashions and the receptiveness especially of the youth towards the same, have made the tailor an indispensable unit of the modern sophisticated world. The occupation does not require much capital. Though the cost of a sewing machine is around Rs. 500 or more, sewing machines are conveniently available on a hire purchase system. Big units usually employ a few tailors or cutters and they are paid generally on piece rate basis. Average daily wages paid to tailors, cutters, etc. were around Rs. 5 in 1968. In Panaji, Margao and Vasco-da-Gama they were paid Rs. 4·50. Charges of the tailor differ according to the type of sewing and texture of the cloth. It is a skilled job with no social stigma attached to the occupation.

The accessories required are composed of a few articles such as thread, pins and needles, buttons, canvas cloth, making pencils or chalk, measuring tape, etc. These accessories are usually purchased locally. In the category of tools and equipment, the sewing machine comes first. It is followed by a pair of scissors and an iron.

In a small shop, the tailor does everying single-handed. In medium and large size establishments, the owner himself does the important job of cutting and at times sewing, but making of buttonholes, sewing on hooks and eyes, is entrusted to paid employees.

Suits, shirts, waistcoats, skirts and blouses, minis, midis and maxis are the usual items of sewing in the district. In the district is witnessed the strange admixture of the orthodox and modern apparel.

Ready-made garments

In the district of Goa there were 14 units engaged in the manufacture of ready-made garments as on March 31, 1972. These

units were located at Chorao, Mapusa, Bicholim, Mhardol, Margao, Panaji and Curchorem. Of the 14 units, one was engaged in the manufacture of brassieres, besides bags. One unit undertook the manufacture of plastic bags besides fancy dress. One unit also manufactured pillows.

The total fixed capital investment of all these units put together was Rs. 93,800·00 which gave the per unit average of Rs. 6,700·00 the maximum amount utilised towards fixed capital by a single unit was Rs. 19,309·00 while the minimum was Rs. 500·00. The investment towards working capital of 12 of these units put together came to Rs. 1,56,000·00. This gave a per unit average of Rs. 13,000·00 The maximum amount invested by a single unit as working capital stood at Rs. 40,000 while the minimum was Rs. 700·00. All these units provided employment to 79 persons giving a per unit average of six persons. The maximum number employed by a single unit stood at 16 and the minimum at 2.

BICYCLE SHOPS

The bicycle is perhaps the cheapest and the most convenient mode of transport within the reach of the common man. There are a number of shops in the district spread both in the rural and urban areas, which besides hiring out bicycles to the public, also undertake their repairs. These shops keep in store spare parts and accessories such as handles, bearings, rims, tubes, tyres, out-machines, scissors, spanners, wrenches, bolts, nuts and screws. Table No. 3 gives the number of private cycles and cycles for hire, rural and urban, talukawise for the year 1968-69, and Table No. 4 gives the distribution of private cycles and cycles for hire in urban areas for the year 1971-72.

TABLE No. 3.- NUMBER OF PRIVATE CYCLES AND CYCLES FOR HIRE, RURAL AND URBAN, TALUKAWISE.

District/Taluka	Number of cycles								
	Private			For hire			Total		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Goa District .	16,030	4,977	21,007	2,929	1,688	4,617	18,959	6,665	25,624
Tiswadi ..	2,029	2,290	4,319	133	588	721	2,162	2,878	5,040
Salcete	5,299	1,115	6,414	1,178	356	1,534	6,477	1,471	7,948
Bardez .	4,842	583	5,425	901	149	1,050	5,743	732	6,475
Mormugao ..	668	646	1,314	113	322	435	781	968	1,749
Ponda .	902	90	992	117	73	190	1,019	163	1,182
Bicholim .	467	38	505	83	58	141	550	96	646
Pernem .	433	46	479	107	23	130	540	69	609
Quepem ..	694	33	727	196	36	232	890	69	959
Sanguem ..	227	85	312	23	43	66	250	128	378
Canacona ..	331	8	339	71	11	82	402	19	421
Satari .	138	43	181	7	29	36	145	72	217

TABLE No. 4—DISTRIBUTION OF PRIVATE CYCLES AND CYCLES FOR HIRE IN URBAN AREAS.

Municipality	No. of cycles and taxes levied					
	Total		Private cycles		Cycles for hire	
	No.	Rs.	No.	Rs.	No.	Rs.
Goa District ..	6,272	32,291	4,737	20,085	1,535	12,206
Panaji ..	2,301	13,005	1,667	7,148	634	5,857
Margao ..	1,762	6,086	1,418	4,022	344	2,064
Mapusa ..	540	2,596	431	1,724	109	872
Vasco-da-Gama ..	1,066	7,276	846	5,076	220	2,200
Ponda ..	138	942	100	600	38	342
Bicholim ..	173	993	97	650	76	343
Pernem ..	32	109	19	57	13	52
Quepem ..	73	231	38	93	35	138
Sanguem ..	69	338	49	234	20	104
Chauri .	44	164	12	42	32	122
Valpoi ..	74	551	60	439	14	112

HIRED CONVEYANCES

Taxis in the district provide quick conveyance to tourists. A few of the taxis regularly ply between Panaji-Mapusa, Panaji-Agasaim, Cortalim-Margao, Cortalim-Vasco-da-Gama, and between a number of other places on per seat basis. The unofficial estimates put the gross income of these taxi drivers at about Rs. 40·00 per day.

A few of these taxi drivers take their vehicles from their owners to whom they pay about Rs. 20·00 to Rs. 25·00 per day. The Servicing etc. of the taxi is the responsibility of the taxi driver.

Besides taxis, there are a few auto-rickshaws in the district. An unofficial estimate puts the number of auto-rickshaws in the district around forty. At present auto-rickshaws ply mainly in the towns of Panaji and Margao. These auto-rickshaws fetch their owners an income of about Rs. 20·00 to Rs. 25·00 per day.

The district of Goa being a tourist centre, a large number of tourists visit the place specially during the fair season. The prohibitive cost of other modes of transport forces them to take motorcycles for the same. This has given rise to a number of motorcycle riders who provide conveyance facilities to tourists by carrying them on motorcycles to their destination.

Some of these motorcycle riders take their vehicles on hire while a majority own the same. As per an unofficial estimate, the number of such motorcycle riders who ply their vehicles on hire, is placed around a thousand in the district of Goa.

These motorcycle riders earn anything between Rs. 10·00 to Rs. 30·00 per day. Those who take the vehicle on hire have to pay at least about Rs. 8·00 to Rs. 10·00 per day to the owner. The rainy season is the slack season while summer and winter are the peak seasons.

The main difficulties met by the taxi and auto-rickshaw drivers and motorcycle riders are those regarding the availability of spare parts.

BAKERIES

The impact of European habits on the Indian way of living is witnessed in the bakery products. Originally, bakeries were started to cater to the needs of the European officials. Local people also began to develop a taste for western food in due course of time. Bakery products then became a hot favourite of Indian nationals as they provided cheap and substantial food to the poor. As a result of urbanisation, the demand for bakery products has increased.

In the district of Goa, there were by the end of March 1972, 94 bakeries. They were located at Guirim, Morgim, Ponda, Sancordem, Pernem, Bicholim, Kolamb (Canacona), Durbate, Vagalim-Oxel, Camorlim, Pale, Mhardol, Siolim, Mormugao Harbour, Duler, Usgao, Sanquelim, Jua, Bambolim, Carapur, Chorao, Priol, Panaji, Valpoi, Arpora, Sanvordem, Ponchawadi, Cortalim, Curchorem, Corlim (Tiswadi), Madhe (Canacona), Verna, Cundaim, Margao, Bastora, Candolim, Cuelim, Virnora, Velguem, Pilerne, Dabolim, Vasco-da-Gama, Cacora, Naroa, Piedade, Parra, Corlim (Mapusa), Porvorim, Assolda, Revora, Bordem, Cumbarjua, Aldona, Assagao, Betim, Divar and Fatorpa. These bakeries engaged themselves in the manufacture of bakery products such as bread, toast, biscuits, cakes, etc.

Accessories and Tool and Equipment

Wheat flour, sugar, yeast, butter, flavouring essences, eggs, etc. constitute the main raw materials required by the occupation. All these articles are mostly purchased locally on wholesale basis. The requirement of raw materials depends on the total turnover of the unit. The equipment consists of an oven with its accessories such as metal sheets, moulds, iron rods, vessels, big plates to prepare dough and cupboards to store the baked stuff as also other furniture and utensils.

Process

The process of manufacturing bread is not a complicated one. Wheat flour is mixed with water and the dough is prepared. After adding yeast to it, it is kept in a warm place and allowed to ferment.

Dough, in portions of suitable sizes, is kept after a few hours in moulds, in an oven and baked and thus bread is prepared. At times, sugar is also added for taste. The occupation requires little skill excepting where pastries, biscuits and other dainties are prepared.

The total investment of 78 of these bakeries by way of fixed capital came to Rs. 9,36,000·00 giving a per unit average of Rs. 12,000·00. The maximum amount invested by way of fixed capital by a single unit stood at Rs. 2,75,000·00 while the minimum was Rs. 500·00.

The investment towards working capital of 86 bakeries was to the extent of Rs. 9,46,000·00. The per unit working capital came to Rs. 11,000·00. The maximum amount that was utilised by a single bakery towards working capital was Rs. 5,00,000·00 while the minimum was Rs. 500·00.

Of the units engaged in the manufacture of bakery products, 92 provided employment to 368 persons giving a per unit average of four persons. The maximum number employed by a single unit stood at thirteen while the minimum was only one.

RICE AND FLOUR MILLS

Rice is the staple food of the district and as such, rice milling occupies the prime place and constitutes an important occupation. Till recently, women used to grind with a grinding stone in their houses. In the absence of electricity in the initial stages, these rice and flour mills worked on oil engines. Now most of them use electric power. Electric motors, oil engines, grinders, balancers and other minor tools, constitute the main equipment.

By the end of March 1972, there were in the district, 149 rice and flour mills.

Of these, 85 were combined rice and flour mills. The total fixed capital investment of all these 85 mills came to around Rs. 10,95,650·00. This gave the average fixed capital investment per unit as Rs. 12,890·00. The maximum amount invested towards fixed capital by a single unit was Rs. 43,971·00 while the minimum was Rs. 3,000·00. Of these 85 units, 66 utilised an amount of Rs. 1,12,200·00 for working capital. The average per unit working capital came to Rs. 1,000·00. The maximum amount engaged in working capital by a single unit stood at Rs. 20,000·00 while the minimum was Rs. 100·00. Of these 85 units, 83 provided employment to 139 persons. Only one person was employed in respect of 43 of these units. The maximum number employed by a single unit stood at 8.

Besides those mills which undertook both flour and rice milling, there were seven which were exclusively rice mills. The total fixed capital investment of all these units amounted to Rs. 1,48,400·00

giving a per unit average of Rs. 21,000·00, the maximum amount invested towards fixed capital by a single unit being Rs. 45,000·00 and the minimum being Rs. 7,000·00. Of these units, five utilised an amount of Rs. 49,500·00 towards working capital. The average working capital utilised by a single unit came to Rs. 9,900·00, the maximum amount required towards the same by a single unit being Rs. 25,000·00 and the minimum being Rs. 1,000·00. These seven units provided employment to ten persons, of which four units provided employment to a single person each while three units provided employment to two persons each.

Flour mills numbered 43. The total investment by way of fixed capital of all the flour mills came to Rs. 3,36,475·00 giving an average per unit fixed capital of Rs. 7,825·00, the maximum amount invested towards fixed capital by a single unit being Rs. 56,500·00 and the minimum being Rs. 2,000·00. Of these 43 flour mills, 37 invested an amount of Rs. 49,765·00 towards working capital. This gave the average per unit working capital as Rs. 1,345·00. The maximum amount invested towards working capital by a single unit stood at Rs 15,000·00 while the minimum was Rs. 200·00.

Of the 43 units, 42 provided employment to 58 persons, 29 to one person each, ten to two persons each and three to three persons each.

In respect of 13 units, they undertook the extraction of oil along with rice and flour milling. The total fixed capital investment of all thes units came to Rs 2,87,300·00 giving a per unit average of Rs. 22,100·00, the maximum amount invested towards fixed capital by a single unit being Rs 1,00,000·00 and the minimum being Rs. 7,815·00. The total working capital requirement of 11 of these units came to Rs. 1,91,400·00 This fixed the per unit average working capital at Rs. 17,400·00. The maximum amount utilised towards working capital by a single unit stood at Rs. 1,00,000·00 while the minimum was Rs 500·00. All these units provided employment to 29 persons.

The employees of flour mills and rice husking mills were paid around Rs. 3·25 in Panaji, Margao and Vasco-da-Gama, and Rs. 3·00 per day at Mapusa.

CONFECTIONERIES

There were in the district, six confectioneries by the end of March 1972. They were located at Margao, Mapusa and Old Goa. They undertook the manufacture of chocolates, toffees, peppermints, etc. The average fixed capital investment per unit comes to Rs. 22,800·00, the maximum amount invested by way of fixed capital being Rs. 50,000·00 and the minimum being Rs. 10,000·00.

The working capital requirement of five of these units amounted to Rs. 1,20,000·00, the average per unit working capital being Rs. 24,000·00. The maximum amount utilised by way of working capital by a single unit was Rs. 40,000·00 while the minimum was Rs. 10,000·00. Of these units, five provided employment to thirty persons. This gave a per unit average of six persons.

AERATED WATERS

The ice-fruit vendor always attracts the attention of kids as well as elders. As a place where no prohibition was ever introduced and where drinking of liquor is no taboo, the manufacture of soda-bicarb is taken up by a number of units since most of the liquors are consumed mixed with soda-bicarb. In the absence of protected water supply, Goans are habituated to the consumption of soda-bicarb and what surprise it gives to a tourist to see a cinegoer washing his hands and mouth with soda-bicarb could only be imagined.

In the district of Goa, there were by the end of March 1972, 46 units engaged in the manufacture of ice-candies, ice-creams, aerated waters and other soft drinks. Of these, 10 units were engaged in the manufacture of ice. 9 of these units invested an amount of Rs. 6,51,000·00 giving a per unit average fixed capital of Rs.. 72,333·00, the maximum amount utilised by a single unit towards the same being Rs. 1,45,000·00 and the minimum being Rs 16,700·00. These 9 units have invested Rs. 76,400·00 by way of working capital. This gave an average working capital of Rs. 8,490·00. The maximum amount utilised towards working capital by a single unit was Rs. 15,000·00 while the minimum was Rs. 2,000·00. These units provided employment to 37 persons with an average of four per unit. A maximum number of 7 were employed by a single unit against a minimum of 3.

There were in the district 18 units engaged in the manufacture of ice-cream and ice-fruits. These units were located at Sanguem, Mapusa, Margao, Ponda, Panaji, Curchorem, Calangute, Goa Velha and Pernem. Of these, four units undertook the manufacture of aerated water and cold drinks also.

The total investment by way of fixed capital of sixteen of these units came to Rs. 3,84,000·00, giving an average of Rs. 24,000·00. The maximum amount invested towards fixed capital by a single unit was Rs. 70,000·00 and the minimum was Rs. 3,500·00. All the seventeen units have utilised an amount of Rs. 97,750·00 towards working capital with a per unit average of Rs. 5,750·00. The maximum amount utilised towards working capital by a single unit was

Rs. 20,000·00 while the minimum was Rs. 500·00. Sixteen of these units provided employment to sixty-four persons. This gave an average of four persons per unit. The highest number of persons employed by a single unit stood at 8 while the lowest was 1.

Besides the units engaged in the manufacture of ice, ice-fruits and ice-candies, 18 units were engaged in the manufacture of aerated waters and soft drinks. Of these units, 4 were large units. They have been treated separately.

These 4 large units were located at Panaji, Borim and Margao. The total fixed capital of all the 4 units amounted to Rs. 23,94,000·00. This gave an average fixed capital of a single unit at Rs 5,98,500·00. The maximum amount utilised towards fixed capital by a single unit was Rs. 10,50,000·00 while the minimum was Rs. 3,75,000·00. All these four units together utilised an amount of Rs. 2,91,000·00 by way of working capital giving an average of Rs. 72,750·00 per unit, the maximum being Rs. 2,00,000·00, and the minimum being Rs. 40,000·00. All these units provided employment to 177 persons. These units provided employment to 94, 46, 28 and 13 persons respectively

Besides the four large units, there were fourteen smaller units engaged in the manufacture of aerated waters and soft drinks. These units were located at Bicholim, Paliem (Bardez), Cundaim, Piligao, Ponda, Sanquelim, Mapusa, Vaddem, Panaji, Siolim and Paliem (Sanguem).

A" these units have invested an amount of Rs. 49,322·00 in fixed capital, placed the average fixed capital per unit at Rs. 3,523·00, the maximum amount utilised towards the same by a single unit being Rs. 7,465·00 and the minimum being Rs. 300·00. The total working capital utilised by these units amounted to Rs. 22,932·00. This gave an average of Rs. 1,638·00. The maximum amount utilised towards working capital by a single unit stood at Rs. 8,215·00 while the minimum was Rs. 70·00. Eleven of these units provided employment to 21 persons.

RADIO ASSEMBLING AND SERVICING AND WATCH REPAIRS

Radios and transistors which were once considered as luxury items have now become indispensable to the modern society especially to urbanites. It has given rise to a number of shops undertaking radio assembling and servicing. Only three units undertaking assembling and servicing of radios and transistors have been recorded in the Directory of Small Scale Industries of Goa, Daman and Diu, 1972. The total fixed capital investment of two of these units

came to Rs. 7,000·00. These units invested Rs. 6,000·00 by way of working capital with an average of Rs. 3,000·00 per unit. The figures of employment provided were available for only one unit which provided employment to three persons.

However, it may be stated here that besides the units that have found place in the Directory and those who undertake the assembling and servicing of radios and transistors, there were a number of units which engaged themselves only in the repairs of radios, transistors, etc. These units do not require heavy investment by way of fixed capital. However, the repair charges are usually heavy depending upon the nature and quality of the work done, in view of the fact that the accessories, spare parts and tools used by them are numerous and costly.

Watches have also become indispensable even to the rural folk in modern times. There are in the district, a few establishments that undertake sales and repairs of watches. Being a highly skilled job, these watch repairers usually charge exorbitant charges.

HOTELS AND LODGING AND BOARDING HOUSES

Goa being a centre of tourist interest, a number of tourists, including foreigners visit the place in large numbers throughout the year. This naturally has given impetus to the establishment of a number of hotels and lodging and boarding houses. In respect of lodging and boarding houses, some of them have confined their business only to providing lodging facilities to tourists while some others provide boarding facilities too. In 1971, there were in the district of Goa, seven hotels, five lodging houses and 49 inns. The total bed strength of all these hotels and lodging and boarding houses stood at 1,835. The following statement gives information in respect of these hotels and lodging and boarding houses, taluka-wise, for the year 1971 :—

Taluka	Existing establishments							
	No.	No. of beds	Hotels		Lodging houses		Inns	
			No.	No. of beds	No.	No. of beds	No.	No. of beds
1	2	3	4	5	6	7	8	9
Total ..	61	1,835	7	445	5	138	49	1,252
Tiswadi ..	37	1,099	4	314	3	119	30	666
Salcete .	10	398	2	94	1	14	7	290
Bardez ..	5	120	....	....	1	5	4	115
Mormugao ..	6	178	1	37	....	....	5	141
Ponda .	2	32	....	....	....	....	2	32
Quepem ..	1	8	....	....	....	....	1	8

Accessories in respect of mere lodging houses consist of beds, chairs, tables, fans, etc. Where facilities for boarding also are available, the accessories consist of dining tables, chairs, utensils, crockery and cutlery and glassware. In respect of posh hotels, facilities for geyser, air-conditioners, water coolers and such other luxuries are also made available. A few provide telephone facilities too.

The boarding houses can be classified into Goan and non-Goan. Goan boarding houses usually provide Goan type of food which consists of *nistyachi kodi* (*humann*, fish curry), rice (many a time boiled rice), other varieties of fish such as fried fish, salted fish, *ros*, egg curry, mutton xacuti, etc. In non-Goan vegetarian boarding houses, the meals consist of rice, chappati, vegetables, curds and buttermilk. The Goan boarding houses usually do not provide either curds or buttermilk, instead they provide *solanchi kodi* (curry prepared from dried rind of the fruit of '*Kokum*').

The 61 hotels and lodging and boarding houses mentioned earlier, provided employment to 783 persons. The following statement gives taluka-wise break-up of the employment provided by these establishments category-wise.

Taluka	Working staff as on 31st December 1971									
	Total		Administrative		Kitchen and buffer		Waiters		Other Services	
	MF	M	MF	M	MF	M	MF	M	MF	M
Total ..	783	702	189	159	160	145	242	233	192	165
Tiswadi	460	410	108	87	100	90	143	136	109	97
Salcete	129	119	41	40	23	21	34	34	31	24
Bardez .	74	57	15	9	12	10	34	32	13	6
Mormugao ..	104	100	21	19	24	23	27	27	32	31
Ponda .	14	14	3	3	1	1	4	4	6	6
Quepem	2	2	1	1	..	.	.	..	1	1

The importance of these establishments can be gauged from the number of persons taking the benefit of these establishments. The following table gives the movement of guests in hotels and lodging and boarding houses by habitual residents, information for which is available for the territory as a whole, for the year 1971.

TABLE No. 5.—MOVEMENT OF GUESTS IN HOTELS, LODGING AND BOARDING HOUSES AND INNS

Habitual Residents	Total		Type of Establishment					
			Hotels		Lodging Houses		Inns	
	No. of guests	No. of nights spent	No. of guests	No of nights spent	No. of guests	No. of nights spent	No. of guests	No. of nights spent
Total	1,11,040	2,54,215	33,502	70,551	7,402	26,721	70,136	1,56,943
I. Habitually resident in the Union Territory—								
(a) Indians	18,825	51,424	2,671	3,964	817	3,636	15,337	43,824
(b) Foreigners	144	362	12	163	..	..	132	199
II. Habitually resident in the other States of India—								
(a) Indians	86,255	1,85,873	27,434	56,662	6,401	22,702	52,420	1,06,509
(b) Foreigners	641	2,455	177	689	67	93	397	1,673
III. Habitually non-resident in India	5,175	14,101	3,208	9,073	117	290	1,850	4,738

RESTAURANTS

During the olden days, there were no restaurants in existence. The principal cause of this was the observance of casteism which put taboo on taking eatables prepared by persons of another caste. It was also due to the static nature of economy, which no movement of persons from one place to another, except in pilgrimage. With the changing pattern of socio-economic life of the community, restaurants came into existence. The facilities provided for quick transport resulted in the movement of persons from place to place. This ultimately gave impetus to the establishment of restaurants. These restaurants came to be established around the bus stands and around busy places. Usually nowadays, at least a tea shop is found in almost every village. Many of these restaurants provide snacks and hot drinks like tea, coffee and milk, and non-alcoholic cold drinks. Even in a town like Panaji, it is found that a number of people flock to these restaurants for their breakfast. The development of tourism during recent years has also led to the increase in the number of restaurants.

These restaurants can mainly be classified into Goan restaurants and Udipi restaurants. Snacks available in Udipi restaurants are South Indian dishes such as *idli, dosa, uttapa,* etc. In Goan restaurants, particularly we get *samusas, patal bhaji* prepared from split pulses such as *channa* (gram), etc. Almost all the restaurants now serve *batata-wada, samosa, shiro, keli halva* (sweet prepared from plantains), etc. Many of these restaurants provide meals mostly on rice plate basis.

Rice, wheat, gram flour, semolina (*rava*), ghee, vanaspati, oil, groundnut oil, condiments and spices, vegetables, onions, potatoes, tea powder, sugar and milk, mutton, eggs, fish are the main items of food required daily. All these items are available in local markets. The equipment required by these restaurants depends upon the size of the same. The equipment of a rural tea shop consists of only a few utensils, benches, tables, etc. In the medium and large size restaurants, especially in urban areas, they keep up-to-date furniture and are better equipped with various sets of utensils, decent chairs and tables, a radio set, etc.

The employment in such establishments consists of cooks, waiters, cleaners, etc. The work of a cook is to prepare various types of food and snacks, and of a waiter, to serve the orders inside as well as outside, placed by the customers, and of a cleaner, to clean the utensils, tables and the flooring. The number in each category depends on the size of the establishment. In a small unit, one man performs all the odd jobs. These employees are paid according to

the work allotted to them. Cooks are usually paid higher wages as compared to waiters and cleaners.

CINEMA HOUSES

The mode of entertainment of the people has also undergone a significant change in the course of time. Formerly, people were more interested in *dashawatari* shows and *tiatras*. Of late, they have developed a taste for films.

In the year 1972-73, there were in the district 24 cinema houses of which 13 were permanent structures and 11 were temporary structures. The total strength of seats in these cinema houses was 10,875 of which only 9,805 seats were in use. The number of matinee shows stood at 7,749 as against the number of night shows which was 10,679 during the same year. The total number of spectators stood at 34,50,600 and the income realised was to the tune of Rs. 40,42, 670·00 from the sale of 34,49,239 tickets. The total entertainment tax collected was Rs. 12,92,050·00.

Table No. 6 gives information in respect of cinema houses operating in the district, taluka-wise, in the year 1972-73.

OTHER MISCELLANEOUS OCCUPATIONS

Besides the occupations described so far, there are various other miscellaneous occupations such as butchers, fish vendors, flower sellers, fruit and vegetable vendors, goldsmiths, *pan-bidi* sellers, shorthand and typewriting institutes, etc.

The foregoing does not attempt a complete survey of the occupational scene, but it is hoped that it would give the reader a fairly interesting insight into the occupational pattern of the people in the Goa District.

TABLE No. 6.—INFORMATION ON CINEMA HOUSES OPERATING IN THE DISTRICT DURING THE YEAR 1972-73.

Description	Total	Tiswadi	Salcete	Bardez	Mormugao	Ponda	Bicholim	Pernem	Quepem	Canacona
Cinema Houses—										
Permanent	13	3	2	2	2	2	1	....	1	...
Temporary	11	1	2	4	....	...	1	1	1	1
Number of seats										
Total	10,875	2,210	2,118	2,090	1,179	1,096	590	330	1,042	320
In use	9,805	2,210	1,883	1,720	1,128	1,088	590	...	966	220
Films exhibited	2,159	433	400	478	230	196	220	...	166	36
Indian	1,475	266	194	348	147	177	187	....	121	35
American	518	150	73	120	83	14	33	....	45	....
European	150	15	128	5	...	1	....	...	....	1
Italian	5	....	....	5	..	....	....	....	....	....
Russian	1	....	1	....	....	....	....	....	....	....
Others	10	2	4	....	....	4	....	....	....	....
Shows performed—										
Total—Day shows	7,749	1,927	1,406	1,809	577	738	778	..	439	75
Total—Night Shows	10,679	1,923	2,295	1,310	1,005	1,447	1,431	..	1,047	221

Of Indian films ..	16,498	3,359	3,230	2,705	1,200	2,166	2,114	....	1,429	295
Of American films	1,598	407	245	398	382	14	95	....	57	....
Of European films	290	56	221	11	....	1	....	....	....	1
Of Italian films ..	5	..	....	5	....	....	....	....	....	....
Of Russian films	1	..	1	....	....	....	....	....	....	....
Of other films ..	36	28	4	....	....	4	....	....	....	....
Spectators—										
Day shows ..	15,55,573	5,07,619	3,39,521	2,56,687	1,21.658	1,38.762	91,711	....	95,836	3,759
Night shows ..	18,95,027	3,97,042	5,39,391	2,24,789	2,88,431	1,46,392	1,55,251	....	1,31,899	11,623
Tickets sold—										
Number of tickets ..	34,49,239	9,03,680	8,78.912	4.81,465	4.09,740	2,85,354	2,46,962	....	2.27,735	15.391
Income from sale (Rs)	40,42,670	10,59,152	11,71,189	5,63,702	5,00,682	3.20,607	1.98.644	....	2,15,788	12.896
Entertainment tax (Rs.) ..	12,92,050	3,75,229	3,33,327	1,99,507	1,76.097	91,854	55,246	....	58,205	2,585

* * *

CHAPTER 9 – ECONOMIC TRENDS

In the chapters that have preceded, is given the description of the principal sectors of the district economy such as agriculture and irrigation, industries, banking, trade and commerce, communications and miscellaneous occupations. However, these chapters have been devoted to the mere description of factors as they stand and they do not envisage economic analysis regarding trends in the district economy, neither do they give any information regarding economic prospects of the district. In this chapter it is contemplated to undertake the study of livelihood pattern and these economic factors with a view to presenting the trends in the district economy and future prospects and development plans of the district economy. These trends and development plans have been presented in the form of a consolidated account of each of the economic factors.

LIVELIHOOD PATTERN

As per the Censuses of 1961 and 1971, the population of the district has been economically classified into two categories such as workers and non-workers. Workers are further sub-divided into nine different groups such as cultivators ; agricultural labourers ; livestock, forestry, fishing, hunting and plantation, orchards and allied activities ; mining and quarrying ; manufacturing, processing, servicing and repairs ; construction ; trade and commerce ; transport, storage and communications ; and other services.

Tables No. 1 and 2 give the taluka-wise distribution of workers category-wise during the Censuses of 1961 and 1971, respectively. However, comparison between the data of these two Censuses is not possible in view of the fact that the definition of workers has been changed for 1971 Census as from what it was for 1961 Census.

The first three categories among the workers may be grouped under agricultural activities. Thus the total number of persons engaged in agricultural and allied activities in the district would come to 1,09,311 as per the Census of 1971. It clearly brings out that as many as 42·96 per cent of the workers were engaged in agricultural pursuits which still continues to dominate the economic structure of the district. Agriculture was followed by industry with 30,712 persons, giving a percentage of 12·07 to the total workers. Trade and commerce accounted

TABLE No. 1.—DISTRIBUTION OF WORKERS CATEGORY-WISE AS PER

District/Taluka		Workers: Total Workers (I-IX) P	M	F	I As Cultivator P	M	F
1		2	3	4	5	6	7
Goa District	T	2,44,261	1,47,036	97,225	1,04,139	54,161	49,978
	R	2,13,628	1,25,270	88,358	93,126	50,861	47,265
	U	30,633	21,766	8,867	6,013	3,300	2,713
Tiswadi ..	T	29,750	18,999	10,751	9,642	4,997	4,645
	R	17,585	10,362	7,223	8,387	4,288	4,099
	U	12,165	8,637	3,528	1,255	709	546
Salcete ..	T	42,992	25,261	17,731	10,488	5,169	5,319
	R	38,332	21,910	16,422	10,014	4,908	5,106
	U	4,660	3,351	1,309	474	261	213
Bardez ..	T	34,043	19,503	14,540	12,818	6,010	6,808
	R	31,646	17,692	11,954	12,610	5,904	6,706
	U	2,397	1,811	586	208	106	102
Mormugao ..	T	15,673	11,896	3,777	1,712	837	875
	R	12,720	9,404	3,316	1,673	812	861
	U	2,953	2,492	461	39	25	14
Ponda ..	T	24,398	14,806	9,592	13,851	7,995	5,856
	R	23,526	14,124	9,402	13,729	7,907	5,822
	U	872	682	190	122	88	34
Bicholim ..	T	21,976	13,258	8,718	10,870	5,674	5,196
	R	20,500	12,168	8,332	10,562	5,532	5,030
	U	1,476	1,090	386	308	142	166
Pernem ..	T	19,942	10,549	9,393	14,104	6,626	7,478
	R	19,222	10,093	9,129	13,806	6,473	7,333
	U	720	456	264	298	153	145
Quepem ..	T	14,161	8,133	6,028	8,167	4,353	3,814
	R	13,766	7,873	5,893	8,083	4,308	3,775
	U	395	260	135	84	45	39
Sanguem ..	T	18,112	11,285	6,827	6,835	3,728	3,107
	R	17,341	10,179	6,622	6,652	3,636	3,016
	U	771	566	205	183	92	91
Canacona ..	T	9,979	5,769	4,210	5,998	3,402	2,596
	R	9,793	5,614	4,179	5,975	3,390	2,585
	U	186	155	31	23	12	11
Satari ..	T	13,235	7,577	5,658	9,654	5,370	4,284
	R	9,197	5,311	3,886	6,635	3,703	2,932
	U	4,038	2,266	1,772	3,019	1,667	1,352

THE 1961 CENSUS

Workers					
II As Agricultural Labourer			III In Mining, Quarrying, Livestock, Forestry, Fishing, Hunting and Plantations, Orchards and Allied Activities		
P	M	F	P	M	F
8	9	10	11	12	13
37,957	12,233	25,724	29,998	22,153	7,845
34,643	11,069	23,547	28,427	20,759	7,668
3,314	1,164	2,150	1,571	1,294	177
4,755	1,798	2,957	1,455	1,292	163
3,172	1,241	1,931	1,038	897	141
1,583	557	1,026	417	395	22
11,844	3,690	8,154	3,097	2,390	707
11,389	3,502	7,887	2,934	2,248	686
455	188	267	163	142	21
5,900	1,542	4,358	2,685	2,376	309
5,672	1,479	4,193	2,639	2,332	307
228	63	165	46	44	2
2,680	1,107	1,573	1,155	1,042	113
2,610	1,077	1,533	861	767	94
70	30	40	294	275	19
3,049	991	2,058	2,756	1,859	897
2,943	941	2,002	2,697	1,809	888
106	50	56	59	50	9
1,730	383	1,347	5,833	4,271	1,562
1,664	371	1,293	5,548	4,036	1,512
66	12	54	285	235	50
1,846	482	1,364	663	602	61
1,750	452	1,298	650	590	60
96	30	66	13	12	1
1,792	674	1,118	2,114	1,275	839
1,689	641	1,048	2,085	1,253	832
103	33	70	29	22	7
1,214	486	728	8,301	5,466	2,835
1,149	468	681	8,137	5,334	2,803
65	18	47	164	132	32
1,579	514	1,065	862	718	144
1,568	512	1,056	857	713	144
11	2	9	5	5	....
1,568	566	1,002	1,077	862	215
1,037	385	652	981	780	201
531	181	350	96	82	14

TABLE No.

District/Taluka		Workers: IV-V In Manufacturing including Household industry			Workers: VI In Construction		
		P	M	F	P	M	F
1		14	15	16	17	18	19
Goa District ..	T	18,344	16,431	1,913	3,741	3,679	62
	R	14,842	13,201	1,641	2,930	2,882	48
	U	3,502	3,230	272	811	797	14
Tiswadi ..	T	2,467	2,316	151	787	780	7
	R	1,039	975	64	320	319	1
	U	1,428	1,341	87	467	461	6
Salcete ..	T	5,136	4,692	444	579	567	12
	R	4,552	4,143	409	511	501	10
	U	584	549	35	68	66	2
Bardez ..	T	3,646	3,201	445	706	698	8
	R	3,126	2,724	402	652	644	8
	U	520	477	43	54	54	..
Mormugao ..	T	1,789	1,667	122	324	315	9
	R	1,404	1,303	101	240	237	3
	U	385	364	21	84	78	6
Ponda ..	T	1,286	1,109	177	84	82	2
	R	1,167	1,000	167	72	70	2
	U	119	109	10	12	12	..
Bicholim .	T	1,182	854	328	125	125	..
	R	942	677	265	89	89	..
	U	240	177	63	36	36	..
Pernem ..	T	1,021	957	64	825	806	19
	R	990	926	64	787	768	19
	U	31	31	..	38	38	..
Quepem ..	T	690	631	59	80	77	3
	R	658	601	57	72	69	3
	U	32	30	2	8	8	..
Sanguem ..	T	411	370	41	136	134	2
	R	345	306	39	119	117	2
	U	66	64	2	17	17	..
Canacona ..	T	442	417	25	449	49	..
	R	435	411	24	48	48	..
	U	7	6	1	1	1	..
Satari ..	T	274	217	57	46	46	..
	R	184	135	49	20	20	..
	U	90	82	8	26	26	..

1.—contd.

Workers								
VII In Trade and Commerce			VIII In Transport, Storage and Communications			IX In other Services		
P	M	F	P	M	F	P	M	F
20	21	22	23	24	25	26	27	28
12,163	8,505	3,658	15,300	14,484	816	22,619	15,390	7,229
8,300	5,087	3,213	12,409	11,753	656	13,951	9,658	4,293
3,863	3,418	445	2,891	2,731	160	8,668	5,732	2,936
2,314	1,611	703	2,423	2,231	192	5,907	3,974	1,933
892	433	459	1,300	1,174	126	1,437	1,025	402
1,422	1,178	244	1,123	1,057	66	4,470	2,939	1,531
3,306	2,368	938	3,285	3,179	106	5,257	3,206	2,051
2,340	1,430	910	2,994	2,913	81	3,598	2,265	1,333
966	938	28	291	266	25	1,659	941	718
2,589	1,558	1,031	1,492	1,405	87	4,207	2,713	1,494
2,039	1,026	1,013	1,422	1,337	85	3,486	2,246	1,240
550	532	18	70	68	2	721	567	254
1,208	865	343	4,838	4,666	172	1,967	1,397	570
761	560	201	3,843	3,711	132	1,328	937	391
447	305	142	995	955	40	639	460	179
745	623	122	1,122	1,025	97	1,505	1,122	383
632	516	116	1,060	964	96	1,226	917	309
113	107	6	62	61	1	279	205	74
595	537	59	647	641	6	993	773	220
417	361	56	538	533	5	740	569	171
179	176	3	109	108	1	253	204	49
322	190	132	381	291	90	780	595	185
286	155	131	339	254	85	614	475	139
36	35	1	42	37	52	166	120	46
326	275	51	397	376	21	595	472	123
300	250	50	356	336	20	523	415	108
26	25	1	41	40	1	72	57	15
242	233	9	438	426	12	535	442	93
189	181	8	331	323	8	419	354	65
53	52	1	107	103	4	116	88	28
382	114	268	127	120	7	540	435	105
378	111	267	123	116	7	409	313	96
4	3	1	4	4	..	131	122	9
133	131	2	150	124	26	333	261	72
66	64	2	103	92	11	171	132	39
67	67	....	47	32	15	162	129	33

TABLE No. 2.—DISTRIBUTION OF WORKERS,

District/Taluka		Total Workers (I to IX)			I Cultivators		
		P	M	F	P	M	F
1		2	3	4	5	6	7
Goa District	T	2,54,475	1,92,624	61,851	60,519	41,899	18,620
	R	1,87,141	1,36,362	50,779	58,334	40,498	17,836
	U	67,334	56,262	11,072	2,185	1,401	784
Tiswadi	T	34,368	26,534	7,834	5,319	3,525	1,794
	R	14,935	11,272	3,663	4,518	3,039	1,479
	U	19,433	15,262	4,171	801	486	315
Salcete	T	46,995	33,094	13,901	7,108	3,427	3,681
	R	30,993	20,147	10,846	6,887	3,290	3,597
	U	16,002	12,947	3,055	221	137	84
Bardez	T	33,570	24,293	9,277	8,050	4,651	3,399
	R	28,359	20,001	8,358	7,835	4,512	3,323
	U	5,211	4,292	919	215	139	76
Mormugao	T	25,953	22,634	3,319	543	355	188
	R	8,107	6,027	2,080	516	338	178
	U	17,846	16,607	1,239	27	17	10
Ponda	T	26,899	20,869	6,030	6,887	5,381	1,506
	R	24,793	19,042	5,751	6,823	5,324	1,499
	U	2,106	1,827	279	64	57	7
Bicholim	T	18,928	14,740	4,188	5,289	4,255	1,034
	R	16,161	12,634	3,527	4,997	4,056	941
	U	2,767	2,106	661	292	199	93
Pernem	T	16,768	11,944	4,824	8,619	5,836	2,783
	R	15,924	11,304	4,620	8,396	5,710	2,686
	U	844	640	204	223	126	97
Quepem	T	13,613	10,434	3,179	5,249	3,870	1,379
	R	12,926	9,883	3,043	5,150	3,829	1,321
	U	688	551	136	99	41	58
Sanguem	T	17,514	12,758	4,756	4,448	3,521	927
	R	16,174	11,698	4,476	4,338	3,445	893
	U	1,340	1,060	280	110	76	34
Canacona	T	9,112	7,198	1,914	4,152	3,397	755
	R	8,747	6,876	1,871	4,070	3,316	754
	U	365	322	43	82	81	1
Satari	T	10,755	8,126	2,629	4,855	3,681	1,174
	R	10,022	7,478	2,544	4,804	3,639	1,165
	U	733	648	85	51	42	9

CATEGORY-WISE, AS PER THE CENSUS OF 1971

II Agricultural Labourers			III Livestock, Forestry, Fishing, Hunting and Plantation, Orchards and allied activities			IV Mining and Quarrying		
P	M	F	P	M	F	P	M	F
8	9	10	11	12	13	14	15	16
38,296	20,076	18,220	10,496	9,247	1,249	16,237	12,634	3,603
34,470	17,915	16,555	9,355	8,187	1,168	14,815	11,512	3,303
3,826	2,161	1,665	1,141	1,060	81	1,422	1,122	300
4,523	2,559	1,964	1,003	913	90	389	318	71
2,865	1,628	1,237	651	576	75	161	157	4
1,658	931	727	352	337	15	228	161	67
9,547	4,508	5,039	1,338	1,196	142	643	587	56
8,389	3,818	4,571	1,135	1,021	114	570	519	51
1,158	690	468	203	175	28	73	68	5
4,378	1,958	2,420	1,531	1,397	134	1,264	1,223	41
4,105	1,815	2,290	1,484	1,357	127	1,127	1,089	38
273	143	130	47	40	7	137	134	3
1,271	706	565	697	646	51	410	342	68
1,236	690	546	333	302	31	349	283	66
35	16	19	364	344	20	61	59	2
5,499	3,010	2,489	1,959	1,667	292	758	662	96
5,406	2,955	2,451	1,931	1,641	290	716	621	95
93	55	38	28	26	2	42	41	1
2,570	1,336	1,234	669	632	37	4,386	3,649	737
2,373	1,241	1,132	608	575	33	3,667	3,099	568
197	95	102	61	57	4	719	550	169
2,273	1,052	1,221	386	366	20	161	152	9
2,195	1,024	1,171	380	360	20	155	146	9
78	28	50	6	6	..	6	6	..
2,369	1,464	905	269	232	37	1,092	806	286
2,309	1,419	890	266	229	37	1,079	793	286
60	45	15	3	3	..	13	13	..
2,129	1,144	985	856	636	220	6,357	4,252	2,105
1,894	1,006	888	804	586	218	6,220	4,166	2,054
235	138	97	52	50	2	137	86	51
892	497	395	1,248	1,095	153	65	65	..
889	497	392	1,242	1,090	152	63	63	..
3	..	3	6	5	1	2	2	..
2,845	1,842	1,003	540	467	73	712	578	134
2,809	1,822	987	521	450	71	708	576	132
36	20	16	19	17	2	4	2	2

TABLE No.

District/Taluka		V Manufacturing, Processing, Servicing and Repairs: Household Industry (a) P	M	F	Other than Household Industry (b) P	M	F	VI Construction P	M	F
1		17	18	19	20	21	22	23	24	25
Goa District	T	14,724	12,257	2,467	16,988	14,913	1,075	11,338	9,926	1,412
	R	12,726	10,577	2,149	8,350	7,628	722	7,126	6,254	872
	U	1,998	1,680	318	7,285	7,285	353	4,212	3,672	540
Tiswadi	T	1,183	1,053	130	2,670	2,570	100	1,961	1,660	301
	R	689	619	70	663	625	38	583	473	110
	U	494	434	60	2,007	1,945	62	1,378	1,187	191
Salcete	T	3,749	3,320	429	3,939	3,744	195	1,582	1,374	208
	R	3,162	2,836	326	1,841	1,750	91	538	517	21
	U	587	484	103	2,098	1,994	104	1,044	857	187
Bardez	T	2,672	2,181	491	2,567	2,493	74	1,175	1,128	47
	R	2,267	1,830	437	1,805	1,755	50	902	881	21
	U	405	351	54	762	738	24	273	247	26
Mormugao	T	647	587	60	2,477	2,324	153	3,394	2,844	550
	R	517	474	43	803	680	123	2,180	1,755	425
	U	130	113	17	1,674	1,644	30	1,214	1,089	125
Ponda	T	1,491	1,189	302	1,263	1,166	97	792	622	170
	R	1,430	1,132	298	841	789	52	695	530	165
	U	61	57	4	422	377	45	97	92	5
Bicholim	T	1,047	778	269	1,344	1,050	294	215	200	15
	R	875	663	212	1,005	774	231	187	173	14
	U	172	115	57	339	276	63	28	27	1
Pernem	T	1,406	947	459	323	298	25	1,579	1,574	5
	R	1,379	929	450	281	256	25	1,494	1,489	5
	U	27	18	9	42	42	..	85	85	..
Quepem	T	732	659	73	838	752	86	141	132	9
	R	709	639	70	722	645	77	124	116	8
	U	23	20	3	116	107	9	17	16	1
Sanguem	T	593	537	56	340	317	23	157	123	34
	R	553	502	51	232	212	20	114	84	30
	U	40	35	5	108	105	3	43	39	4
Canacona	T	902	777	125	93	81	12	253	187	66
	R	882	760	122	71	65	6	241	175	66
	U	20	17	3	22	16	6	12	12	..
Satari	T	302	229	73	134	118	16	89	82	7
	R	263	193	70	86	77	9	68	61	7
	U	39	36	3	48	41	7	21	21	..

2.—contd.

VII			VIII			IX		
Trade and Commerce			Transport, Storage and Communications			Other Services		
P	M	F	P	M	F	P	M	F
26	27	28	29	30	31	32	33	34
24,676	20,873	3,803	22,964	21,468	1,496	39,237	29,331	9,906
11,593	8,886	2,707	11,048	10,051	997	19,324	14,854	4,470
13,083	11,987	1,096	11,916	11,417	499	19,913	14,477	5,436
4,212	3,589	623	2,051	1,980	71	11,057	8,367	2,690
801	579	222	832	814	18	3,172	2,762	410
3,411	3,010	401	1,219	1,166	53	7,885	5,605	2,280
6,439	5,634	805	3,700	3,433	267	8,950	5,871	3,079
2,409	1,839	570	2,311	2,176	135	3,751	2,381	1,370
4,030	3,795	235	1,389	1,257	132	5,199	3,490	1,709
4,122	3,196	926	2,454	2,350	104	5,357	3,716	1,641
2,742	1,897	845	2,111	2,028	83	3,981	2,837	1,144
1,380	1,299	81	343	322	21	1,376	879	497
3,450	3,005	449	9,194	8,688	506	3,866	3,137	729
547	358	189	909	691	218	717	456	261
2,907	2,647	260	8,285	7,997	288	3,149	2,681	468
2,067	1,819	248	2,214	1,988	226	3,969	3,365	604
1,633	1,404	229	2,022	1,798	224	3,296	2,848	448
434	415	19	192	190	2	673	517	156
1,357	1,161	196	720	669	51	1,331	1,010	321
963	818	145	585	535	50	901	700	201
394	343	51	135	134	1	430	310	120
559	437	122	319	305	14	1,143	977	166
478	367	111	272	258	14	894	765	129
81	70	11	47	47	..	249	212	37
914	795	119	878	791	87	1,131	933	198
811	701	110	802	716	86	954	796	158
103	94	9	76	75	1	177	137	40
740	663	77	912	798	114	982	767	215
574	515	59	769	655	114	676	527	149
166	148	18	143	143	..	306	240	66
473	264	209	326	281	45	708	554	154
422	218	204	304	260	44	563	432	131
51	46	5	22	21	1	145	122	23
339	310	29	196	185	11	743	634	109
213	190	23	131	120	11	419	350	69
126	120	6	65	65	..	324	284	40

for 24,676 persons with a percentage of 9·70 to the total workers. Transport, storage and communications accounted for 22,964 persons, giving a percentage of 9·02 to the total workers. Mining and quarrying was another important economic activity in the district during the pre-liberation period of colonial Portuguese domination. In 1971, it provided employment to 16,237 persons which was 6·38 per cent to the total workers. Construction activities provided employment to 11,338 persons, a section which accounted for just 4·45 per cent to the total workers. The remaining 39,237 persons amongst workers were engaged in other services not specified so far. They were 15·42 per cent of the total workers.

Though the direct comparison of the number of persons employed category-wise during these two Censuses is not possible, comparison on the basis of percentage population engaged in the different occupations is possible. As such, in what follows is given a pattern of livelihood followed as per the Census of 1961. The first three categories among workers as per this Census also can be grouped under agricultural activity. However, it must be noted here that these workers include persons engaged in mining and quarrying and this naturally resulted in a greater percentage of workers in this group. Thus, the total number of persons engaged in agricultural activities in the district would come to 1,72,094 i.e., as much as 70·46 per cent to the total workers. It is followed by industries with a population of 18,344 engaged in the same, giving a percentage of 7·51 to the total workers. Then follow transport, storage and communications ; trade and commerce ; and construction : in that order, with a population of 15,300, 12,163 and 3,741 respectively.

MINING

The first reference to the mineral contents in Goa soils dates back to the 16th century. A Dutch traveller by name Mr. John H. V. Linschoten had written that in Goa can be found stones containing iron. He has also stated that the scientists have opined that gold and copper would also be available from them. He further adds that, however, the Government authorities do not permit the extraction and export of the same. Regarding the position of minerals as it existed then, Fonseca, in his book, 'An Historical and Archaeological Sketch of the City of Goa' (1878), has to say the following :

> " Laterite is the stone most abundant throughout the district. Iron is found at Bage, Satari, Pernem and especially in the provinces of Zambaulim. Though no other mines or quarries are worked, the above by no means represent all the geological resources of the

country, which are very imperfectly known, owing to the soil not having yet been scientifically explored."

The prospecting of iron ore and manganese ore started in Goa as early as 1905. Though the regular export of iron ore from Goa commenced in 1947, it gained momentum in 1949. The following statement gives the export of iron and manganese ore from 1949 to 1951 :

(Figures in tonnes)

	1949	1950	1951
Iron Ore	188	1,12,230	4,36,395
Manganese Ore ...	11,197	29,985	85,422

It may be mentioned here that iron was valued at Rs. 30·00 per ton while the average price of manganese was around Rs. 125·00 per ton. The statement regarding mineral production and its values from 1952 to 1970 can be had from the chapter on Industries.

Prospects

Export trade is expected to continue to be the mainstay of the iron ore industry in Goa. Recently, both Japanese and West German interests were invited to examine the possibilities of developing the Bellary-Hospet deposits which average 67 to 68 per cent of metal content as against Goa's 58 per cent. Also, Indian exports from other areas average 60 to 66 per cent iron. Thus, iron ore from the territory is likely to be at a disadvantage in furture in view of the higher grade ore available to overseas buyers from other areas.

It is likely, therefore, that iron ore exports from the territory may level off at about seven million tons to these two countries with another million tons or so to all the other countries making a total export of about eight million tons.

This is also desirable since export trade alone cannot contribute to the economic development of the territory. It can only be achieved by the setting up of iron and steel industries locally. Further, on the basis of the preliminary assessment of reserves at 600 to 800 million tons, an optimum level of annual exploitation cannot be greater than 12 to 13 million tons and would give a life of about 50 to 60 years.

INDUSTRIES

Until the Liberation of the territory, the district of Goa had no industrial development worth a mention. The only industrial activity was mainly confined to the extraction of metalliferous ores besides a few rice mills, auto repair workshops, a Mangalore tile factory, oil

mills, bottling units, soap factories, tyre retreading units, units manufacturing steel furniture, canning units, cashew units and a match factory.

"With a high wage level and the liberal import of consumer goods then possible, there was in the colonial days, hardly any incentive to any potential investor to start industries here. Besides, assured high profits on import trade shied the investor away from an enterprise which involved risk. Lack of facilities like power and water and the indifference of the then Government were other factors which inhibited industrial growth. Thus, on the eve of Liberation, the territory had a weak industrial structure."[1]

Limited markets, absence of cheap source of power and of technical know-how, and lack of institutional credit facilities were also responsible for weak industrial structure in the district. The licensing of the industrial units in the Portuguese regime was done by the Board of Technicians at Lisbon, who had little knowledge of the local conditions. Therefore, only such industries came up which were either service industries or those which could survive on local market.

The following description regarding potential and prospects of the industrial development of the district are solely based upon the Techno-Economic Survey of Goa, Daman and Diu, 1964, and the Development Programmes for Goa, Daman and Diu, 1970, both published by the National Council of Applied Economic Research.

Cashew Nut and Cashew Nut Shell Liquid (CNSL): The processing of cashew nuts is the most important industrial activity in the territory. In 1960, the industry processed about seven thousand tons of raw nut. As on March 31, 1972, the district had eight cashew nut processing units of which three were established prior to Liberation. All these units have a processing capacity of more than ten thousand tons. The cashew nut industry in India earn substantial foreign exchange by the export of cashew kernel and cashew nut shell liquid, the latter recovered as a by-product during roasting. However, India had to import large quantities of raw cashew nuts mainly from African countries to sustain this industry. As these countries are themselves setting up processing units, the supply of raw nuts from these countries is likely to decrease in future and these countries would also be competing with India in the export market. As such, it is essential to bring more area under cashew plantation. The forest department of the Government of Goa, Daman and Diu have already taken steps to achieve this aim. The drum roasting method used in Goa does not permit

[1] Development Programmes for Goa, Daman and Diu, 1970, by the National Council of Applied Economic Research.

recovery of cashew nut shell liquid. The present processing of about five thousand tons of raw nuts should yield about five hundred tons of cashew nut shell liquid.

Coir Industry: The production of coconut by the Liberation of the territory was estimated at seventy million.

The coir industry in Goa has not developed commensurate with the resource potential. The husks obtained from the present output of about eighty million nuts can yield about 6,000 tons of coir fibre. Presently, only about 110 to 120 tonnes of coir fibre and yarn rope are manufactured, mostly by the manual method of beating the retted husks. The rest is used as fuel. With a systematic tapping of the market, it should not be difficult to obtain husks to produce about 3.000 to 4,000 tonnes of fibre per year.

There are at present, three mechanised coir defibering units, two privately owned and one State owned. Out of the two privately owned units, one has not yet started production and the other closed down after working for some time. The State owned units has recently gone into production and supplied coir fibre to the State owned production centres of coir products such as ropes, door mats, etc.

The main problem faced by the coir units is that of marketing. The local demand is small and is mainly confined to ropes for barges and household purpose. There is, however, good demand for coir products in foreign markets as also in centres like Bombay, Delhi and Calcutta. Development of this industry in Goa would, therefore, depend upon its ability to cater to these markets. Presently, the efforts of the industry supply coir fibre to these markets are hampered mainly for want of a suitable bailing press. As coir pressed occupies only one-fifth of the volume of coir unpressed, the transport cost of the latter makes it uncompetitive in the distant markets. It is felt, therefore, that the installation of a bailing press at a central location to serve all the three units would go a long way in lifting the industry from its present plight.

Looking to the pattern of demand, coir industry in Goa should mainly concentrate on production of coir fibre (of requisite quality), coir yarn and ropes. While the existing units are quite suitable for production of fibres, spinning machines will have to be installed for the production of yarn. Rope manufacture can continue in the cottage sector and the existing production centres. Necessary technical advice on the retting of husk, grading of fibres, its treatment with bleaching agents to give it the requisite shade and softness, etc., should be obtained from the Coir Board of India, who over the years, have developed the necessary expertise in the field.

Once the coir industry in Goa is enabled to stand on its feet, the expansion of this industry to diversify its range of production could be undertaken. This could include manufacture of carpets, mattresses, etc. by installation of powerlooms and rubberised coir. Rubberised coir is a new industry and has excellent scope for development. The range of products include mattresses, cushioning materials, air filters, packaging material, etc. The mechanised defibering units now in Goa are particularly suited for the production of bristle fibres from dry husks wanted in the manufacture of rubberised coir.

Sugar Industry : Vast areas of cultivaple waste are proposed to be brought under sugarcane cultivation in the talukas of Satari, Sanguem, Quepem, Canacona and Bicholim. The area under sugarcane is expected to increase from the present 800 hectares to about 4,000 hectares by the end of the Fifth Plan. Considering the scale of irrigation planned to be provided that the other measures proposed, the National Council of Applied Economic Research feels that the target is ambitious and may not be achieved in such a short time. (This has come true and the area under sugarcane by the end of 1972-73 has increased only to 900 hectares).

The yield of sugarcane per hectare in the district is less when compared to the yield of the neighbouring States. It is about 60 tonnes in Goa, 62 tonnes in Maharashtra, 76 tonnes in Andhra Pradesh and 55 tonnes in Karnataka All the present sugarcane production goes for the manufacture of gur. There is also a keen desire amongst sugarcane growers to set up sugar factory in the territory. On the basis of the present yield of 60 tonnes of sugarcane per hectare, about 4,000 hectares will have to be under sugarcane cultivation to sustain a standard size sugar unit. Setting up of additional capacity would also be justified to meet the increasing demand for sugar. The demand for sugar in the country is estimated at 4·5 million tonnes in 1973-74 on the basis of projected per capital consumption of 7·5 kilogrammes. This would require, on the basis of 90 per cent plant utilisation, about five million tonnes capacity, while the present licenced capacity amounts to only 4·4 million tonnes. Even assuming that all the licenced capacity would materialise, there would still be scope to have an additional capacity of about 0·6 million tonnes. The first sugar mill in the district on a co-operative basis, known as the Sanjivani Sahakari Sakhar Karkhana Ltd., has already gone into production from the beginning of 1974.

Canning and Preservation Industry : There are six canning factories in Goa which process fruit, fish and meat products. The important fruits available in the region are pineapple, mangoes, jackfruits, bananas and papaya. Till now, mainly, pineapple was being canned, but it is reported that the canning factories now accept mangoes and other

fruits, also. Of fish, the main varieties canned are mackerel, sardines, herrings, prawns and tuna. In 1966-67, about 138 tonnes of fish were canned. Meat is also canned whenever available. Presently these units are not running to full capacity because of the shortage of raw material. This is true of the two cold storages also in Goa, each having a storage capacity of 75 tonnes.

Chemical and Allied Industries: Prior to Liberation, the only chemical units in the territory were those of soap, candle making and industrial gases. There has been a good development since and new units have come up in plastics, pharmaceuticals, pesticides, paints and soap and candle manufacture. A unit to manufacture potassium permanganate with a capacity of 1,500 tonnes per year and a beer making unit with a capacity of 25,000 hectolitres are already under construction and are expected to go into production shortly. Based on certain locational advantages such as a good port and navigable inland waterways, a fertiliser plant and a pesticide unit have also been set up.

Fertilisers: A fertiliser unit has been set up in Goa at Sancoale. The unit will be manufacturing urea and will have a capacity to produce 1,60,000 tonnes in terms of nitrogen. Naphtha will be used as feedstock which will be obtained from Bombay refineries and transported by sea in 2,500 ton capacity barges.

The project was to be located at Marcaim but as there were difficulties in the acquisition of land, the location has now been shifted to Sancoale.

The same unit can take up the manufacture of ammonium nitrate which is used as an explosive in the mining industry. The present demand in Goa is of the order of 550 tonnes per year. Ammonia would be available within the plant itself as it one of the principal materials which will be produced for the manufacture of urea.

Pesticides: There is already one unit in Goa at Fatorda. One more unit has been set up at Corlim by Messrs. CIBA India Ltd. The unit is licenced to produce phosphomiden DDVP, zinc dimethyldithio carbamate.

Calcined Petroleum Coke: A letter of intent has been issued for setting up a unit to produce calcined petroleum coke, having a capacity of 50,000 tonnes per annum. The raw material required (i.e. raw petroleum coke) will have to be imported as there is likely to be a shortage of raw coke in the country. This naturally would favour a coastal location. An additional advantage in locating this unit in Goa is that it will be near the consuming industries like aluminium and ferro-alloys.

A major use of calcined petroleum coke is in the manufacture of electrodes required in electro thermal and electrolytic industries. In the former could be included industries such as ferro-alloys, steel by electric arc furnaces, electric pig iron units, calcium carbide, etc., and in the latter aluminium caustic soda (electrolytic), etc. It is also used in the manufacture of carbon refractories for blast furnaces, carbon brushes, dry battery electrodes, cinema arc rods, etc.

The demand for calcined petroleum coke is estimated at around 2,00,000 tonnes by 1973-74. At present, there is only one unit in the country—India Carbon Ltd., Assam, having a calcining capacity of about 65,000 tonnes per annum. One more unit is being set up at Barauni with a capacity of about 45,000 tonnes per annum bringing the total capacity in the country to about 1,10,000 tonnes. Thus from the point of demand the Goa unit should have no problem. It is, therefore, suggested that implementation of the proposed capacity in Goa be speeded up.

There is also good scope for setting up industries to manufacture electrode paste, electrodes for metallurgical and chemical industries and other carbon products, large quantities of which are presently imported into the country.

Plastic and Plastic Products: There are at present, ten units engaged in the manufacture of plastic products such as buttons, pens, bags, sheets, tubings, optical frames, etc. For more efficient working, these units should diversify their range of production and also take up manufacture of common items such as lamp-shades water bottles, trays, soap boxes, etc.

Cashew liquor manufacture: Goa is the only region which used cashew apple for the preparation of liquor. The juice of the apple which is collected in vats is allowed to remain for a few days to ferment. The fermented juice is distilled in simple stills to produce *urrack*, a low alcohol beverage. Second distillation of the product with more juice produces *feni*, a liquor which is between 28-35 under proof (whisky is 25 under proof). An estimated 2,50,000 gallons of cashew *urrack* and *feni* are produced and consumed in Goa. It may be possible to explore foreign markets for cashew liquor provided refinement in taste and smell is carried out. Packing also will have to be improved. Possibility of utilising cashew apples for the preparation of jams, pickles, candies, etc. should be also explored.

There are a number of other items in the consumer as well as engineering category such as agricultural implements, net making, hand tools, drawing instruments, garment fittings, wire products, diesel engines, radio and electronics spare parts, glass items, etc.,

which can be profitably manufactured in the small scale sector. However, setting up of these industries would much depend on the ability of entrepreneurs to cater to the outside market as the local demand for many of these products is not likely to be much.

Salt Industry: Salt is produced in large quantities in the district. By 1875, salt formed one of the principal sources of profit. The numerous salt pans that existed in the country yielded large quantities of salt far and above the local demand in consequence of which it was exported for foreign consumption. The following statement gives information in respect of manufacture and consumption of salt in 1876[1].

District	No. of Villages	No. of Salt Pans	No. of Labourers working in salt pans	Manufacture	Consumption	
					For Domestic use	For Manure
				Khandis	Khandis	Khandis
Old Conquests						
Tiswadi ..	11	104	546	1,60,415	40,210	40,210
Salcete ..	12	197	466	46,117	20,000	10,000
Bardez ..	8	64	339	78,400	2,820	11,600
New Conquests ..	5	21	380	8,440	37,613	14,202
Total .	36	386	1,731	2,93,372	1,00,643	76,012

The export of salt was always increasing. In 1907, salt to the extent of 7,49,000 Bengali maunds valued at Rs. 1,59,000 was exported. The corresponding figures for 1927 and 1928 stood at 3,15,000 and 3,25,000 Bengali maunds valued at Rs. 3,13,000·00 and Rs. 3,22,000·00 respectively.

During the period 1950-60, salt to the extent of 30,00,000 Bengali maunds was exported from the territory. In 1956, there were in the district, 144 producers employing 667 workers. The total product was 5,595 tonnes. The production of salt during the year 1961 stood at 5,733 tonnes. The salt pans in the district were located in the talukas

[1] Based on Sketch of the City of Goa by Fonseca.

of Tiswadi, Bardez, Salcete and Pernem. The following statement gives the areas under salt production:

Taluka	Location	Area (in hectares)
Tiswadi	On the bank of Mandovi river in Panaji and Ribandar : at Calapur on the Mandovi river and at Siridao, Curca and Santana on the Zuari river	197·3391
Bardez	On the bank of the Sinquerim river at Arpora.	92·7053
Salcete	On the bank of the Sal river	102·5350
Pernem	On the bank of the Tiracol river ..	18·0232

During the year 1969-70, there were in the district, 71 salt pan producers. They provided employment to 236 workers. The total production was put at 2,520 metric tonnes valued at Rs. 1,10,062·00. The following statement gives the talukawise break-up of the same :

District/Taluka	Salt pan producers	Workers employed	Output	
			Tonnes	Rs.
GOA DISTRICT ..	71	236	2,520	1,10,062
Tiswadi .	32	99	1,356	52,367
Salcete	15	36	121	5,785
Bardez	20	88	975	48,900
Pernem . .	4	13	68	3,010

AGRICULTURE

The statistical report on the Portuguese settlements in India extracted in the year 1850 by Captain Kol has to say the following about the condition of agriculture in the district :

"*Agricultural Products*: The principal articles are five—rice, salt, coconut, betelnuts and *nachini*; those of the second class are *Udid, Coolit, Tory, Pacolo, Mug*, Beans, Sandom, Potatoes, Chillies, round and long Onions, Girgilim, Coffee, Cotton and Hemp.

Agricultural Implements: The implements used in agriculture are few, namely, the plough, rake, hatchet, mattock, Divolo (a mallet to

break lumps of earth), and Oloi or Guto, a board used for levelling the ground.

Agricultural Charges: The expense of growing rice, in sweet and salt ground is calculated generally at one-third of the value of the produce, but in high sandy lands, the produce in coconut carts at one-fifth, in betelnut carts in some places at a half and in others at one-third.

Fruit: Fruit are of two kinds, wild and garden. Amongst the first are the bulls eye, jagomas, white jambos, babolans, carandans, balcas, guava, cajus, jambolans, churnas, etc. Amongst the second are custard apples, melons, moguins, pomegranates, watermelons, papaya, citrons, oranges, tangerines (sonaringas) pumeloes, Malacca Jambos (churnas).

Wild and Garden flowers: The indigenous flowers are various: some are wild, and others are produced in gardens: they are both much in demand in the markets, particularly by the Hindus. The most common of the wild flowers are cul-champins, nag-champins, onvolans, surgans, madercilvas, candolans, abolins (sky-blue, white, yellow and purple), undans, coasso, or ato, comolans, salcans, etc. From gardens, zaiznios, nentios, mogarins, bhui-champins (these grow like mushrooms), dore-mogarins, xiuntins (various), roses (various), buttons (white and purple), perpetua, abolins (carmine and light red, also gold colour), pat or pach, alexandria (various), etc.

Vegetables: Vegetables are various and abundant, especially in the rainy season. They form the principal food of the Hindus. Those most cultivated are blites, bretalhas, raddish, parslane, tendulins, pumpkins, bendas, cucumbers, yams, caratins, cualengas, nole-kole, salad, etc., etc. Besides there are several others, proper for the use of animals, and also for dyeing purposes."

The position of agriculture as it then stood is aptly described by Fonseca and hence is reproduced below :

" For upwards of two centuries and a half since the conquest of Goa by the Portuguese, agriculture met with little or no encouragement from Government, but continued to demand, as heretofore, the solicitude of the village community. About the same period the religious orders, and pre-eminently among these the Jesuits, who had now become possessed of large landed estates, imparted some impulse to the cultivation of land, especially to the planting of coconut trees on which subject the latter have left an excellent treatise, entitled *Arte Palmarica.* As the land subjected to culture was, however, limited in number, the production of rice was always found to be insufficient for the maintenance of the entire population of the country,

which was, besides, now and then visited by a famine. To supply this deficiency, and, above all, to mitigate the terrible sufferings attendant on seasons of scarcity, the Government, though remiss in matters relating to agriculture, evinced its concern for the comfort of the people by importing large quantities of grain from the neighbouring places at the expense of the Municipal chambers, and storing it in public granaries (*celleiros*), as well as by imposing on the village communities the obligation of supporting the poor people residing in their respective districts. The celebrated Marquis of Pombal was the first Portuguese statesman who took seriously into consideration, the subject of improving the agriculture of Goa and with this object, issued in 1771, the necessary instructions to the local executive authorities. Five years from this date the post of Superintendent of Agriculture (Intendante da Agricultura) was created, whose duties were to suggest and carry out such improvements in the cultivations of lands in each village as were deemed most essential. The result did not, however, answer full the expectations entertained, but still it was satisfactory to find that the produce had palpably increased. In 1729, the quantity of rice grown in the Ilhas, Salcete and Bardez was 9,843 *khumbos* 16 *khandis* 17 *kuros* (41,343, 038½ lbs.); in 1777 there was an increase of 1,827 *khumbos* (7,673,400 lbs.), and in 1805 of 2,350 *khumbos* 3 *khandis* 15 *kuros* (9,870,787½ lbs.).

Since this time agriculture has made steady progress in the country, and forms at present its chief industry. Of the entire territory of Goa, a comparatively small portion consisting of 234,754 acres, is stated to be under cultivation. Out of these rice occupies 122,566 acres; other cereals, vegetables, etc., 77,066; coconut-trees 33,194; areca palms 565; and fruit trees the remainder. The soil is chiefly argillaceous, but also contains light sand, and more or less of decayed vegetable matter. In many parts it is full of stone and gravel. Its fertility varies according to the quality and situation of the land, the supply of water and the employment of labour. Manure, consisting of ashes, fish and animal excrement, is largely employed as a fertilizer of the soil. As a rule, the Velhas Conquistas are better cultivated than the Novas Conquistas, owing chiefly to the want of personal security in the latter, which are exposed to the frequent depredations of dacoits. In both these divisions a holding of fifteen or sixteen acres is considered to be a pretty good farm, though the majority of holdings are of small extent.

The staple produce of the country is rice (*oryza sativa*), of which there are two crops—one the winter crop, called *sorodio*, and the other the summer or *vangana*, raised by means of artificial irrigation from the rain water accumulated in reservoirs, ponds and wells. As to the

former, the field is generally ploughed before the commencement of the monsoon, the seed scattered in May or June, and the crop harvested in September; while as regards the latter the ploughing operations begin in October, the sowing in November, and the harvesting in February. Rice is cultivated on low lands, *cazana* or *cantor*, situated near the banks of rivers; the slopes of hills, *molloy*; still grounds *dulpam* or *dulip*; and sandy soils, *quero*; in consequence of which various kinds of seeds are sown. The ratio of the produce to the seed is as follows : Near the banks of rivers it is 10 to 1, in dry and still soils 6 to 1, and in other places 8 to 1, more or less. The quantity of rice produced is sufficient to meet the local demand for only two-thirds of the year. The cost of cultivation is calculated in some places at one-third, and in others at one-half of the value of the produce.

The following statement shows the quantity of rice produced in early district of Goa in the rainy season of 1876, a *khandi* being equal to 266 lbs. :—

		Khandis	Kur.s
Velhas	Ilhas	120,809	0
Conquistas	Salsette	109,153	10
	Bardez	121,419	0
Novas	1st Division	34,297	0
	2nd Division	28,949	0
Conquistas	3rd Division	17,155	16
	4th Division	11,388	11
	... ...	443,170	37

Next to rice, the culture of coconut trees (Cocoa nucifera) is deemed most important, owing chiefly to the variety of uses to which their products are applied. They grow abundantly in beautiful groves on all lands not hilly or serviceable for the production of rice, and along the sea coast, which is finely fringed with them. Hilly places and inferior soils are set apart for the cultivation of such cereals and pulses as *nachini* (*Eleusine Coracana*), *urid* (*Phaseolus radiatus*), *culit* (*Dolichos uniflorus*), *orio* (*Panicum miliaceum*), *mug* (*Phaseolus Mungo*), and *tori* (*Cajanus indicus*); or fruit trees the most important of which are the mango, *ambo* (*Mangifera indica*), the jack, *ponos* (*Artocarpus integrifolia*), the cashew, *caz* (*Anacardium occidentale*), and the plaintain, *quelmo* (*Musa paradisiaca*); of oil and fibrous plants, as *till* (*Sesamum indicum*), *son* (*Crotalaria juncea*); and of various kinds of vegetables,

as potatoes (*Convolvulus Batatas*), radishes (*Raphanus sativus*), yams (*Dioscorea sativa*), *bende* (*Abelmoschus esculentus*), melons (*Cucumis Melo*), water melons (*Cucurbita Citrillus*), cucumbers (*Cucumis sativus*), pumpkins (*Cucurbita Pepo*), bottle gourds (*Cucurbita lagenaria*), and snake gourds (*Trichosanthes anguina*). Besides these, chillies (*Capsicum frutescens*), ginger (*Zingiber officinale*), turmeric (*Curcuma longa*) onions (*Allium Caepa*), and certain vegetables of daily consumption are extensively cultivated in some villages. In the province of Satari enterprising foreigners rented some years ago from Government certain plots of ground for starting coffee plantations. Several experiments were tried, but the result did not prove very encouraging.

The chief agricultural implements in use in the country are the plough, hoe, reaping-hook, rake and mattock.

Goa is seldom visited with great floods. Some of its provinces, indeed occasionally suffer from partial inundations especially during heavy rains, but no great damage results therefrom to the crops. In times of drought the agricultural classes sustain heavy losses, but the people at large are supplied, though at great cost, with rice from British territories. It is only when a famine occurs in these territories, that palpable signs of distress are visible amongst the inhabitants of Goa. Formerly, this country suffered frequently from famines; the years 1553, 1570 and 1632 particularly are said to have been seasons of great scarcity. The condition of the agricultural classes in the Velhas Conquistas has of late improved considerably, owing partly to the general rise in prices of all kinds of agriculture produce and partly to the want of labourers, caused by large emigration of people to British territory. In the Novas Conquistas, however, the cultivators have been reduced to great want and misery through the oppression of the land-owners on the one hand, and their own insolvent circumstances and general poverty on the other. As a rule, the tillers of the former district are much more honest and regular in their habits than those of the latter."

The present data regarding land utilization is based on some sort of survey carried out to find out all data pertaining to land use and crop pattern in 1904.

The net area sown in the district comes to 1,28,430 hectares. The area of 44,699·184 hectares is under paddy. During 1969-70, the average yield of paddy per hectare stood at 1,979 kg. Cashew accounts for 32,517·075 hectares, coconut for 18,496·18 hectares, arecanut for 1,721·154 hectares, sugarcane covers an area of 947 hectares while vegetables account for 400 hectares. Area under sugarcane was just 69·71 hectares during 1960. The details in respect of the present

position of agriculture and irrigation in the district can be had from Chapter 4—Agriculture and Irrigation.

WAGE TRENDS

As already stated earlier, the district has a pre-dominance of agriculture as an occupation. Wages of agricultural labourers depend upon the nature of the work that they have to do. It is witnessed that females are paid about half of the wages given to males. The wages paid to agricultural labourers have shown an upward trend from 1965 to 1968. The following statement gives the average daily wages of agricultural labourers in the district of Goa :

Type of work	1965		1966		1967		1968	
	M	F	M	F	M	F	M	F
Cereals and pulses Plantation :								
Reaping	3·93	1·88	4·24	1·98	4·34	2·04	4·43	2·15
Harvesting	3·93	1·91	4·24	2·07	4·38	2·13	4·45	2·25
Thrashing	3·96	1·89	4·26	2·02	4·45	2·11	4·52	2·18
Ploughing	4·00	1·88	4·32	1·98	4·47	2·04	4·55	2·15
Wetting	3·93	1·88	4·24	1·98	4·34	2·04	4·43	2·15
Weeding	..	1·90	..	2·00	..	2·08	..	2·18
Watering	3·93	1·88	4·24	1·98	4·24	2·04	4·43	2·15
Hoeing	3·93	1·88	4·24	1·98	4·34	2·04	4·43	2·15
Sowing	4·00	1·88	4·32	1·98	4·38	2·04	4·50	2·15
Coconut plantations :								
Digging	3·98	..	4·26	....	4·38	..	4·45	..
Opening trenches and manuring.	3·98	..	4·26	..	4·38	..	4·45	..
Watering	3·93	1·88	4·24	1·98	4·34	2·04	4·43	2·15
Coconut plucking	4·82	..	5·34	..	5·77	..	5·95	..
Toddy tappers	4·14	..	4·61	..	4·70	..	4·75	..

Wages in other economic activities besides agriculture have also shown an upward trend, during the period 1965-73. Wage trends according to professions for the towns of Panaji, Mapusa, Margao and Vasco-da-Gama from 1965-66 to 1972-73 are given in the table that follows :

TABLE No. 3.—AVERAGE DAILY

Profession	Panaji							
	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
1	2	3	4	5	6	7	8	9
Salesmen at groceries ..	4·30	4·40	4·75	5·00	5·75	5·75	6·50	6·50
Public Motor drivers ..	4·66	4·66	5·00	5·50	5·50	5 25	10·00	11·00
Assistant Motor drivers ..	2 75	3·00	3 00	3·00	3 00	3·25	4·00	6·50
Motor Vehicle mechanics ..	5·50	5·81	6·50	6·50	6·50	6·75	8·50	9·00
Tailors, cutters etc. ..	4·25	4·50	4·75	5 00	5·00	5·00	8 00	8·00
Shoemakers and Shoerepairers	3·50	3 50	4·00	4 00	4·25	4·50	6·00	8·00
Tin smiths	3·50	4·00	4·00	4·00	4·50	4·50	6·00	7·00
Electricians . ..	4 00	4·50	4·60	5·00	6·00	6·25	8 00	8·00
Carpenters	5·50	6·00	7 00	8 00	8 00	8·00	9·00	10 00
Sawers of wood ..	6·00	6·00	6·25	..	..	..	..	..
Cabinet makers	4·00	4·50	4·50	5·00	5 25	5·50	9·00	10·00
Masons	5·00	5·50	6·00	7·00	8 50	8·50	9·00	10·00
Glaziers .. .	4·00	4·25	4·50	4 75	5·00	5·50	7·00	8·00
Assistant masons ..	2·50	2·50	2·50	2·75	3·00	3·50	8·00	8·00
Mechanical composers .	4·00	4·00	4·00	..	.	..	9·07	10·53
Hand composers . ..	4·44	4·75	4·75	5·00	6·00	6 00	7·50	8·00
Printers	4·75	4·75	4·75	5·00	6·00	6·25	7·00	8·00
Book-binders . ..	3·75	4·00	4·00	4·50	5·00	5·50	5·50	7·00
Workmen of flour mills and rice husking mills	2·81	3·06	3·25	3·25	3·50	4·00	5·50	6·00
Break makers and pastry cooks (kneaders oven keepers)	4·00	4·50	4·75	5·00	5·00	5·00	6 50	7·00
Confectioners	3·75	4·00	4·50	4 75	5·50	5·75	6·50	7·00
Bidi makers	3·00	3·26	3·30	3·75	4·00	4·50	5·00	7.50
Cooks at restaurants and eating houses (*a*)	3·00	3·00	(*a*) 3·00	(*a*) 3·00	(*a*) 3·30	(*a*) 3·50	7·00	8·00
Waiters and servants at bars and restaurants (*a*)	1·62	1·80	(*a*) 1·80	(*a*) 2·00	(*a*) 2·00	(*a*) 2·00	4·50	6·00
Barbers and hairdressers ..	3·00	3·25	4·00	4·50	5·00	5·25	6·30	7·00
Workmen at laundries	4·00	4·50	4·50	5·00	5·00	5·25	5·50	6·00

(*a*) with meals

WAGES ACCORDING TO PROFESSIONS

Margao							
1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
10	11	12	13	14	15	16	17
4·00	4·25	5·50	5·00	5·00	5·27	6·00	6·50
6·00	6·00	6·00	6·00	6·00	6·50	8·33	9·16
2·66	3·00	3·00	3·00	3·30	3·40	5·83	6·15
5·50	5·50	5·50	6·00	6·00	6·80	9·00	10·00
5·00	5·00	5·00	5·00	5·00	5·00	8·00	9·00
3·50	3·50	4·00	4·00	4·50	4·50	6·00	8·00
..	..	..	..	..	..	..	..
4·33	4·66	4·70	5·00	6·00	6·50	8·00	9·00
5·25	5·75	7·00	8·00	8·50	9·00	9·00	10·00
5·00	5·00	6·00	6·00	6·25	6·25	..	..
4·00	4·50	4·50	5·00	5·00	5·00	9·00	10·00
5·00	5·50	6·00	7·00	8·50	9·25	9·00	10·00
4·12	4·37	4·75	4·75	5·00	..	7·50	8·00
2·50	2·75	2·75	2·75	3·00	3·00	8·00	9·00
..	..	..	..	..	..	..	..
4·75	5·00	5·00	5·00	5·00	5·00	7·75	8·00
4·62	4·75	4·75	5·00	5·30	5·30	7·75	8·00
3·69	4·00	4·00	4·50	5·00	5·00	5·50	7·00
2·75	3·00	3·25	3·25	3·50	3·50	5·25	6·00
4·00	4·25	5·00	5·00	5·00	5·00	5·50	6·00
4·50	5·00	5·00	5·00	5·50	5·50	6·50	7·00
3·00	3·25	3·25	3·50	4·00	5·00	5·00	7·50
2·62	3·00	(a) 3·00	(a) 3·00	(a) 3·75	(a) 4·00	8·00	9·00
1·32	1·40	(a) 1·70	(a) 1·75	(a) 2·00	(a) 2·15	6·00	7·00
3·00	3·10	4·00	4·50	5·00	5·00	5·50	6·00
4·00	4·00	4·00	4·50	4·50	5·00	6·50	7·00

TABLE No.

Profession	Mapusa							
	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
	18	19	20	21	22	23	24	25
Salesmen at groceries ..	3·50	3·50	4·00	4·00	5·00	5·50	5·50	6·00
Public Motor drivers ..	..	..	..	..	6·00	6·00	8·50	9·00
Assistant Motor drivers ..	..	..	..	..	3·00	3·00	6·50	7·00
Motor Vehicles mechanics ..	..	..	..	..	6·00	6·00	9·00	10·00
Tailors, cutters etc. ..	3·75	4·00	4·00	4·50	5·00	5·00	7·50	8·00
Shoemakers and Shoerepairers	3·00	3·00	3·00	3·50	3·50	4·00	6·00	8·00
Tin smiths	..	..	..	..	4·50	4·50	6·00	7·00
Electricians	4·50	4·50	4·50	4·70	5·00	5·00	8·00	8·50
Carpenters	5·00	5·50	6·00	7·00	8·00	8·00	9·00	10·00
Sawers of wood	..	..	5·00	5·00	5·50	6·00	..	..
Cabinet makers	..	..	..	..	..	..	9·00	10·00
Masons	5·00	5·25	5·75	6·50	7·50	8·00	9·00	10·00
Glaziers . .	.	..	4·00	4·00	4·00	4·00	6·50	7·00
Assistant masons	2·50	2·50	2·50	2·50	3·00	4·00	8·00	9·00
Mechanical composers ..	.	..	..	..	..	..	..	..
Hand composers . ..	3·00	3·75	3·75	4·00	4·50	4·50	7·00	8·00
Printers	3·00	3·37	3·50	4·00	4·50	4·50	7·00	7·50
Book-binders . ..	2·75	3·10	3·25	3·50	4·50	4·50	5·00	6·00
Workmen of flour mills and rice husking mills	2·50	2·88	3·00	3·00	3·50	4·00	5·00	5·50
Break makers and pastry cooks (kneaders oven keepers)	4·00	4·00	4·25	4·50	5·50	5·50	5·50	6·00
Confectioners ..	3·50	4·00	4·25	4·50	5·00	5·50	6·50	7·00
Bidi makers . ..	2·75	3·06	3·25	3·50	4·00	4·50	5·00	7·00
Cooks at restaurants and eating Houses (a) ..	2·50	2·50	(a) 2·50	(a) 2·50	(a) 3·00	(a) 3·00	7·00	8·00
Waiters and servants at bars and restaurants (a)	1·50	1·50	(a) 1·50	(a) 1·50	(a) 2·00	(a) 2·00	5·00	6·00
Barbers and hairdressers ..	3·00	3·06	3·50	4·00	5·00	5·00	5·50	6·00
Workmen at laundries ..	4·00	4·00	4·00	4·50	4·50	5·00	5·50	6·00

(a) with meals

3—contd.

Vasco-da-Gama							
1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
26	27	28	29	30	31	32	33
4·00	4·00	4·00	4·00	5·00	5·00	5·50	6·00
..	..	..	..	5·50	5·75	8·33	9·16
..	..	..	..	3·00	3·30	5·83	6·15
6·50	6·75	7·50	7·50	7·50	8·00	8·50	9·00
4·00	4·50	4·75	5·00	5·00	5·00	8·00	8·00
3·50	3·50	3·50	4·00	4·50	4·75	6·00	8·00
..	..	..	..	..	..	6·00	7·00
4·75	4·75	4·80	5·00	6·00	6·00	7·50	8·00
5·25	5·75	7·00	8·00	8·00	8·00	9·00	10·00
..	..	..	..	..	..	..	..
..	..	..	..	..	..	9·00	10·00
5·00	5·25	6·00	7·00	8·00	8·00	8·50	10·00
4·50	..	..	..	..	..	7·00	7·50
2·50	2·50	2·50	2·75	3·00	3·00	8·00	9·00
..	..	..	..	..	..	..	..
4·31	4·50	4·50	5·00	5·00	5·50	6·50	7·00
4·50	4·75	5·00	5·00	5·80	6·00	6·50	7·00
3·50	3·69	4·00	4·00	4·50	4·75	5·50	6·00
3·00	3·06	3·25	3·25	4·00	4·00	5·00	5·50
4·00	4·00	4·50	4·75	5·00	5·25	6·00	6·50
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
		(a)	(a)	(a)	(a)		
2·66	2·75	3·00	3·00	3·30	3·40	7·00	8·00
		(a)	(a)	(a)	(a)		
1·25	1·34	1·50	1·50	2·00	2·25	5·00	6·00
3·00	3·25	4·00	4·50	5·00	5·50	6·00	6·00
4·00	4·00	4·00	4·50	4·50	5·00	6·00	6·00

PRICE TRENDS

In every economy like that of India, prices play a vital role in the State economy. Considered as one of the most important economic indicators reflecting the changes in the economic structure of the state, prices affect all strata of the society. Variations in the prices many a time lead to changes in consumption habits. It also leads to a change in propensity to save and to consume. In a developing nation like India, trying to achieve economic development through planning, prices affect family budgets of the people to a greater extent. In view of this, in what follows is attempted a brief study of price trends and price indices.

Rice, which is the staple food of the people of the district was sold at 26 pounds for 2 sh. in 1874. During the same year *urd* and *culith* were sold at 30 pounds and 50 pounds per 2 sh. respectively.

During the year 1933-34, clean rice of the first variety was available at the rate of a *podd* (1 seer) for 2 annas and 3 pies The second quality rice was available at 2 annas. Boiled rice of the first quality was available at the rate of 11 rupees per sack while the second quality was priced at 10 rupees and 8 annas per sack. Superior sugar was costing 1 anna and 7½ pies per 500 gm. Potatoes were available at the rate of 2 annas and half pies for 500 gm A thousand coconuts used to cost 36 rupees 6 annas and 8 pies.

The prices were constantly on the increase. In 1949, raw rice was available at the rate of 10 annas and 6 pies per *podd*. The price of sugar had also gone up and was available at the rate of 6 annas and 5 pies for 500 gm. The price of potatoes had almost trebled by 1949 from what it was in 1933-34. The price of potatoes had gone up to 7 annas and 2 pies for 500 gm. The price of coconut showed an increase to the extent of 5 times as compared to the price prevailing in the year 1933-34. A thousand coconuts used to cost about 170 rupees

During the year 1956, raw rice was available at 9 annas and 6 pies per *podd*, showing a slight fall in price from the one prevailing in the year 1949. Price of sugar was almost steady and it had increased only by one pie from the price prevailing in 1949. Price of coconut showed a sharp decline in 1956 from the price prevailing in 1949. A thousand coconuts in 1956 were available for about 90 rupees. The price of potatoes had also shown a decrease and potatoes were available at 5 annas and 3 pies for 500 gm.

By 1959, the price of sugar had increased manifold and was available at the rate of 7 annas and 8 pies per 500 gm. The price of coconut had also shown an increase to the extent of 11 times. The cost of one

thousand coconuts was to the extent of 170 rupees. The price of potatoes also had increased manifold and had gone up to 6 annas per 500 gm.

Since the liberation of the territory, Government started collecting prices prevailing in wholesale and retail markets from the important centres of Panaji, Margao and Mapusa. Goa being deficient in food grains, it has to depend on the neighbouring states of Maharashtra and Karnataka for its food supplies. Naturally, the movement of wholesale prices in Goa is dependent on the price variations in these two States. In what follows is contemplated a brief analysis of price trends prevailing during the year 1974 in Panaji market, the capital town of the territory as also the headquarters of the district of Goa.

Paddy

Although the main crop cultivated in the district is paddy, the total production is not sufficient to cater to the needs of the people.

The procurement price fixed by the Government since 1965-66 was Rs. 52 per quintal for all varieties of paddy which was raised to Rs. 56 in 1966-67. During the rabi season of 1968-69, the procurement price was revised and fixed as under :

Item	Quality	Unit	Price
			Rs. Ps.
Paddy	Coarse	Quintal	56·00
	Medium	Quintal	62·00
	Fine	Quintal	67·00

During the year 1972-73, the procurement prices of paddy of coarse quality was raised to Rs. 58·00.

The estimated production of paddy of Goa district during the kharif season of 1974-75 was around 77,500 tonnes as against 1,12,000 tonnes during the kharif season of 1973-74. The production of paddy during the rabi season of 1973-74 was about 16,900 tonnes. The procurement price fixed by the Government and which was prevailing in 1974 was of Rs. 74·00 per quintal.

Rice

(*a*) "*Fine*" *rice*- This quality of rice was not available in the open market for about seven months *viz*. January and February and July to November 1974. Monthwise analysis shows that the wholesale price quoted for this commodity in March 1974 was of Rs. 340·00 per quintal, wherefrom it declined to Rs. 325·00 in April, but rose again to Rs. 330·00 in May and Rs. 335·00 in June. In December the price quoted was Rs. 380·00 per quintal. The average price for the remaining

five months for which this quality of rice was available in the market for the year 1974 works out to Rs. 342·00 as compared to Rs. 300·00 in the previous year.

(*b*) "*Raw-Coarse*" *rice*.—This quality of rice was not available in the open market for a period of 4 months *viz*. January to March and July, 1974. The average price for the remaining eight months worked out to Rs. 312·50 per quintal as against Rs. 217·50 when compared to 1973 prices. It indicates an increase of about 43·7 per cent. The range of variation of this quality of rice was Rs. 280·00 to Rs. 330·00.

(*c*) "*Boiled-Coarse*" *rice*. Unlike other qualities of rice mentioned above, this quality of rice was available in the market throughout the year 1974 with the only exception of the month of March. When compared to 1973 prices, the average wholesale price of this quality of rice showed an increase of about 26·1 per cent i.e. it moved from Rs. 228·13 in 1973 to Rs. 287·75 per quintal in 1974.

A study of monthwise movement of prices of this commodity during the year 1974 shows that it moved steadily from Rs. 264·37 in January and February to Rs. 331·50 in December. There was a stiff rise of Rs. 10·00 from June to July, of Rs. 20·00 from October to November and Rs. 11·50 from November to December 1974.

Taking all the above three qualities of rice, we may say that the average wholesale prices of rice rose to some extent in 1974, and the same being the staple food of the Goan people, it must have affected their cost of living to that extent.

Wheat (Khandwa, Superior Quality)

The wholesale price of wheat has on the whole shown an upward trend, the same having gone up from Rs. 129·74 per quintal in 1972 to Rs. 240·75 in 1974.

The average wholesale prices of wheat during 1974 recorded an increase of about 36·1 per cent over that of 1973. The price reported in 1974 was Rs. 240·75 as against Rs. 176·87 in 1973. Monthwise movement of the price shows that the month of April recorded a rise of Rs. 10·00 over the previous month, but thereafter it declined upto August where the price quoted was Rs. 220·00. Months of September and November again recorded a mild increase when it was quoted at Rs. 250·00 i.e. reaching the level of March. In December there was a decrease of Rs. 5·00 per quintal. However, this quality of wheat was not available during the initial two months of 1974.

It may be noted that wheat being a commodity imported in the district almost to the extent of 100 per cent of its requirements, the price of wheat is dependent on exterior factors, the territory having little control over the same.

Coconut Oil (pure, clean, tin of 17 kgs.)

The average wholesale price of this commodity (tin of 17 kgs.) for the year 1974 when compared to 1973 recorded a rise of 56·02 i.e. an increase of about 35·8 per cent. Monthwise movement of price shows an uncertain trend. The highest price quoted was Rs. 238·00 for a tin of 17 kgs. was in January, followed by a decrease upto March when the price would increase followed by a decrease in price upto October when the price quoted was Rs. 196·50 which was the minimum quoted during the year. The average wholesale price for a tin of 17 kgs. in the year 1974 was of Rs. 212·37.

Groundnut Oil (pure, clean tin of 17 kgs.)

The average wholesale price of groundnut oil in 1974 recorded an increase of about 17·4 per cent over that of 1973. In 1973 the increase was about 60 per cent compared to 1972. A study of monthwise movement of prices shows that the price moved steadily from January (Rs. 30·00) to August (Rs. 160·00) followed by a decrease upto December when the price for a tin of 17 kgs. of the above commodity was quoted at Rs. 144·00.

Vanaspati (Dalda brand, tin of 4 kgs.)

Throughout 1974, this commodity was not available in the market and its distribution to the consumers was done through fair price shops/co-operative stores.

Chillies Dry (Byadgi, long, superior quality)

Compared to 1973 prices, the average wholesale price of this commodity increased by 19·7 per cent in 1974. Month-wise analysis shows that the minimum price quoted per quintal of chillies was Rs. 400·00 in January and the maximum was Rs. 900·00 in October. The increase in price was somewhat stiff in September (rise of Rs. 175·00) June (rise of Rs. 100·00) July (rise of Rs. 75·00) and October (rise of Rs. 50·00). During November a decline in price to the extent of Rs. 212·00 occurred which was, however, followed by a rise of Rs. 25·00 in December.

Potato (Medium quality, Belgaum)

The average wholesale price per quintal of this commodity in 1974 was of Rs. 109·89, which compared to 1973 price (Rs. 105·90) shows an increase of 3·8 per cent. The minimum price quoted was Rs. 85·00 in April 1974, and the maximum was Rs. 133·50 in July 1974.

Onion (Medium quality non-indigenous)

The average wholesale price per quintal of onions in 1974 when compared to that of 1973, shows a decrease of 15 per cent. During the period of 9 months, the prices quoted per quintal of this commodity were well below the average price of 1973.

Coconut (medium size, indigenous per 1,000)

The average wholesale price of coconuts (1,000) for the year 1974 was much above the average for 1973 by Rs. 324·31 i.e. an increase of about 45·60 per cent. Month to month movement of prices shows that the price quoted in January (Rs. 950·00) rose steadily upto May (Rs. 1,125·00). Thereafter it declined considerably upto November (Rs 1,000). In December 1974 there was an increase in the wholesale price to the extent of Rs. 25·00.

Sugar (medium open market per quintal)

The average wholesale price of this commodity for the year 1974 was well above the average price quoted for 1973 by almost 24 per cent. Month-wise analysis shows that the trend in prices was uncertain. The minimum price quoted was Rs. 391·00 in February 1974 and the maximum was Rs. 592·50 in September 1974.

Gur (Belgaum, medium quality per quintal)

The average wholesale price of gur (per quintal) in 1974 compared to 1973 recorded a mild rise of Rs 2·03 i.e. an increase of one per cent The minimum price quoted per quintal of this commodity was Rs 162·50 in May 1974 and the maximum was Rs. 260·00 quoted in November. From May to November the prices moved up steadily, but in December it decreased considerably. The quotation for December was Rs 197·50

The tables giving the average wholesale prices of some important commodities in markets of Panaji, Margao and Mapusa for the years 1965 to 1974 are given in the Appendices 20, 21 and 22

It may be noted here that the consumer has to purchase his necessities from retail market and retail prices affect the family budgets to a greater extent. As such, in what follows, an attempt has been made to describe in brief, the trends in retail prices prevalent in Panaji market.

In a consumer-basket, articles of food-group find the pride of place. In fact the consumer price-index is largely weighed by this group. Movement of retail prices of some important items of the food-group is discussed below.

During 1974, sale of some commodities of the food-group continued through the fair price shops at the prices fixed by the Government. Retail prices for essential commodities such as rice, wheat and sugar sold through fair price shops, were fixed and the supply regulated by the Government.

Rice

Fair price supply of rice was in force throughout the year. The scale of ration was 4 kgs. per adult per month and 2 kgs. per child

per month. The two qualities of rice available through fair price shops were rice boiled (coarse, mill husked) and rice raw (medium mill husked).

The fair price of boiled rice remained stationary from Janualv to March 1974 and it was quoted as Rs. 1·17 per kg. Compared to 1973, the fair price rose by Re. 0·12 i.e. an increase of about 22 per cent. From April to December 1974, this quality of rice was not available in the fair price shop in Panaji.

The fair price of raw rice in 1974 varied between Rs. 1·64 and Rs. 1·79 per kg. The highest quotation was given in August. Compared to the average fair price of 1973, the increase in 1974 was of the order of 22·3 per cent.

In the open market the prices of boiled rice varied between Rs. 2·68 and Rs. 3·50 per kg. The maximum quotation was given in December 1974 when it was quoted at Rs. 3·50.

The price of raw rice in the open market varied from Rs. 3·00 to Rs. 3·50. It rose gradually from January to March by an increase of Re. 0·25 in April. From May to October the price remained constant at Rs. 3·40, wherefrom it increased by Re. 0·05 each in November and December. Compared to 1973 prices, the average price for 1974 rose by about 29 per cent.

Wheat

This commodity also, was distributed through fair price shops. However, the scale of ration per month was as follows :

Month of	Unit	Per adult	Per child
January and February	Grammes	1500	750
March	Do.	1000	500
April to June	Do.	1500	750
July	Do.	2000	1000
August	Do.	3000	1500
September	Do.	2000	1000
October to December . .	Do.	1500	750

The rate quoted per kg. of wheat was Rs. 1·05 from January to March, Rs. 1·22 in April and Rs. 1·34 for the remaining months. Compared to 1973, the rise in fair price of wheat was of Re. 0·37.

In the open market the average price per kg. of wheat for the year 1974 worked out to Rs. 2·50 which is about 38 per cent more than the average price quoted in 1973. Wheat was not available for sale in the open market during January and February and the price quoted in March was Rs. 3·12 which is the highest for 1974. From March, the price showed a decreasing trend upto September when the quotation was Rs. 2·25. Month of October and November recorded a rise in prices to the extent of Re. 0·25 and Re. 0·10 as compared to the earlier month.

Tur dal

The average retail price of wheat works out to Rs. 3·32 which is about 20 per cent more than the price quoted in 1973 (Rs. 2·76). However, during October the price of a kg. of tur dal was quoted as Rs. 4·50 which was considerably higher than the quotation of Rs. 2·60 in February.

Chillies dry (Byadgi, non-indigenous)

The average price of this commodity for the year 1974 when compared to 1973 prices shows that the prices recorded an increase of about 19·2 per cent. During the year under review, the prices moved up from January (Rs. 5·33) to October (Rs. 10·00), followed by a slight decrease in November and December (Rs. 8·00). The highest quotation for the year was given in October 1974 and was Rs. 10·00 per kg.

Onions

The average retail price per kg. of onions in 1974 works out to Re. 0·83 as against Re. 0·92 in 1973, thus recording a decrease of Re. 0·09. During the initial 3 months the price of onions was a little above the average price of 1973 and for the remaining 9 months it was below it.

Coconut

Thoughout the year 1974, the price quoted for each coconut of medium quality was above the average price of 1973 (Rs. 1·04). The minimum price quoted was Rs. 1·28 in January and the maximum was Rs. 1·50 from June to August 1974.

Sugar

Distribution of sugar through the fair price shops was continued during 1974. The scale of ration of sugar during 1974 was as follows :-

January to June September and December	..	500 grammes per person per month.
July, August, October and November	..	400 grammes per person per month.

Sugar was sold in the fair price shops throughout the year at the rate of Rs. 2·15 per kilo which was also the rate prevailing in 1973.

In the open market the movement of price of sugar during 1974 was very uneven. The prices varied between Rs. 4·10 (February 1974) and Rs. 6·00 (September 1974).

The following table gives the average retail prices of some essential commodities of middle class consumption in the Panaji Market :

TABLE No. 4.—AVERAGE RETAIL PRICES OF SOME ESSENTIAL COMMODITIES OF MIDDLE CLASS CONSUMPTION IN PANAJI MARKET

Year	Rice (Boiled, coarse mill husked fair price) Per kg.	Raw rice (medium, mill husked, fair price) Per kg.	Rice (Boiled, medium (N.I.) open market) Per kg.	Rice (Raw-medium mill husked open market) Per kg.	Wheat (Brown medium quality fair price) Per kg.	Wheat (Khandwa, brown, open market) Per kg.	Turdal (Barsi, superior quality) Per kg.	Gram Vatana (medium quality) Per kg.	Moong (medium quality) Per kg.	Coconut oil (mill made) Per litre
1	2	3	4	5	6	7	8	9	10	11
1965	0·74	0·71	N.A.	N.A.	0·55	1·13	1·37	0·90	0·98	5·05
1968 .. .	0·95	1·11	1·71	1·83	0.81	1·46	1·75	1·01	1·24	6·31
1970 .. .	0·93	1·29	1·39	1·58	0·92	1·32	1·94	1·27	1·46	8·16
1971	0·92	1·40	1·51	1·56	0·90	1·34	2·09	1·25	1·67	7·30
1972	0·91	1·36	1·97	2·00	0·88	1·37	2·33	1·36	2·35	6·57
1973 .. .	0·96	1·39	2·44	2·61	0·92	1·85	2·76	2·11	2·79	9·70
1974	1·17	1·70	2·98	3·37	1·29	2·56	3·32	2·94	2·60	13·64
Monthwise—1974:										
January	1·17	1·64	2·73	3·00	1·05	N.A.	2·63	2·70	2·50	14·33
February	1·17	1·64	2·68	3·38	1·05	N.A.	2·60	2·75	2·50	15·00
March	1·17	1·64	2·75	3·50	1·05	3·12	2·55	2·90	2·50	15·00
April	N.A.	1·75	2·82	3·25	1·22	2·75	2·75	3·00	2·52	13·75
May	N.A.	1·75	2·80	3·40	1·39	2·68	2·75	3·00	2·55	13·75
June	N.A.	1·75	2·90	3·40	1·39	2·50	2·80	2·95	2·58	13·25
July	N.A.	1·75	3·00	3·40	1·39	2·38	3·00	2·90	2·55	13·25
August . .	N.A.	1·79	3·00	3·40	1·39	2·25	3·20	2·87	2·50	13·33
September . ..	N.A.	1·70	3·00	3·40	1·39	2·25	4·00	3·05	2·65	13·00
October	N.A.	1·64	3·20	3·40	1·39	2·50	4·50	3·10	2·75	12·75
November	N.A.	1·64	3·40	3·45	1·39	2·60	4·50	3·10	2·75	12·75
December	N.A.	1·75	3·50	3·50	1·39	2·60	4·50	3·00	2·90	13·50

TABLE No. 4 —contd.

Year	Groundnut oil (Pure mill made)	Vanaspati (Tuchar Brand)	Chillies Dry (By-adgi N.I.)	Potato (medium quality N.I.)	Onion (medium quality N.I.)	Coconut (local (medium size)	Sugar crystals (medium quality N.I. Fair Price)	Sugar crystals (medium quality N.I. Open Market)	Gur (medium quality)	Arecanut
	Per litre	Per kg.	Per kg.	Per kg.	Per kg.	Per Coconut	Per kg.	Per kg.	Per kg.	Per kg.
1	12	13	14	15	16	17	18	19	20	21
1965	3 45	4·20	3 60	0 77	0 41	0 48	1·28	N.A.	0·83	7·54
1968 .. .	3 67	4 94	3 40	0 84	0 65	0 56	1·63	3 64	2 19	8·62
1970 . ..	5·52	7 00	8 23	1 08	0 62	0 83	1·75	1·92	1·06	7 83
1971	4·96	6·60	6 35	0 94	0 51	0 83	1·77	2·03	1·56	8·00
1972	4·98	6 42	4 65	1 08	0 74	0 74	2 02	3·31	1·95	7·71
1973 . ..	7·73	8·33	5 88	1·27	0 92	1·04	2·15	3 74	2 26	6·61
1974	9·00	11·16	7 01	1 34	0 83	1·41	2·15	4 67	2·27	8·65
Monthwise—1974:										
January	7·83	N.A.	5·33	1·41	1·00	1.28	2·15	4 17	2·42	7·33
February	8·25	9 00	5 50	1·22	1 00	1·35	2 15	4·10	2·00	8·00
March	8·38	9·00	5 50	1 20	0·95	1 40	2 15	4·20	2·00	8·00
April	8·62	9 41	5 50	1 20	0 82	1.40	2·15	4·20	2·00	8·00
May	9·00	9·82	5·75	1·25	0·80	1·40	2·15	4·20	2·00	9·00
June	9·25	9 82	6·25	1·32	0 80	1·50	2 15	4·22	2·00	9·00
July	9·50	N.A.	7 00	1 48	0·75	1·50	2·15	4·52	2·00	9·00
August	10·17	14 00	7 33	1 48	0 75	1·50	2·15	4 85	2·25	9·00
September	10·00	14·00	9·50	1 50	0·75	1·40	2·15	6·00	2·62	9·00
October	9·00	12 50	10 00	1 28	0 75	1·40	2·15	5·00	2·78	9·00
November	9·00	12·00	8·50	1·36	0 78	1·40	2·15	5·25	2·80	9·00
December	9·00	12 00	8 00	1·40	0 78	1·40	2·15	5·38	2·38	9·00

EMPLOYMENT

The Employment Exchange was set up at Panaji[1] and it started functioning from July, 1962. In the beginning, the activity of this office was mainly covered with registration and placements.

Sub-Employment Exchange

With the gradual increase in the response from the applicants, the need was felt to open two sub-offices of this office in North and South Goa respectively. In the year 1967, two sub-Centres were opened, one at Bicholim and the other at Margao, under the Manpower and Employment Scheme, in order to cater to the needs of the applicants residing in North Goa and South Goa area. Similarly, three more such centres have been opened at Ponda, Curchorem and Vasco-da-Gama. The main functions at these centres are registration and renewal of employment cards. In order to improve the efficiency of the employment exchange, it is proposed to introduce mechanical systems for documentation.

The table on page 516 gives details of work done by the Employment Exchange from 1965 to 1973.

Vocational Guidance Unit

In the year 1969, two more units viz. Vocational Guidance and Employment Counselling and Employment Market Information started functioning under the Manpower and Employment Schemes. The purpose of Vocational Guidance service is to assist young people in choosing a vocation and developing and carrying out a programme to reach their vocational objectives, if they have already made tentative vocational plan, to help them with the evaluation of these plans. It also provides occupational information about various jobs and fields, how to plan career, information about various training and apprenticeship schemes, and individual guidance on their problem. It also promotes vocational consciousness and creates job-mindedness among the youth and prepares them for their vocational choice.

Employment Market Information Unit

The Employment Market Information Unit was established with a view to providing regular and reliable employment market information service for the benefit of Central and State Government employers and persons seeking jobs. The immediate objective is to study employment conditions, the co-ordination of services, the improvement of the methods of obtaining employment data and final compilation and publication of the result. After careful study of the collected data, it

[1] As per Government of India, in the Ministry of External Affairs letter No. F. 9/2/62—Goa dated 14th February, 1962.

TABLE No. 5.—WORKING OF EMPLOYMENT EXCHANGE FROM 1965 TO 1973

Year	Registration			Placement			Submission			No. of applicants on L. R.			No. of vacancies notified				
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	C.G.	U.T.	Q.G.	Private Estt. Act/Non-Act.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1965 ..	9,177	1,192	10,369	663	125	788	8,920	1,430	10,350	3,842	543	4,385	906	1,364	7	65	2342
1966 ..	9,142	1,292	10,434	630	119	749	6,249	828	7,077	4,815	163	4,978	626	825	50	23	1,524
1967 ..	8,798	1,474	10,272	583	126	709	6,509	922	7,431	4,739	388	5,127	496	695	34	64	1,289
1968 ..	9,791	1,751	11,542	732	128	860	10,378	1,645	12,023	6,174	1,048	7,222	868	1,163	66	101	2,198
1969 ..	8,795	1,928	10,723	1,600	297	1,857	10.459	1,789	12,248	3,992	1,068	5,060	431	1,788	48	189	2,456
1970 ..	7,503	1,837	9,340	1,299	280	1,579	12,642	1,970	14,612	5.794	1.494	7,288	N.A.	N.A.	N.A.	N.A.	N.A.
1971 ..	8,102	2,297	10,399	1,220	331	1,551	13,915	2,467	16,382	8.717	1,840	10,557	813	1,341	292	858	3,304
1972 ..	8,224	2,334	10,558	1,250	362	1,612	11,381	2,351	13,732	11,461	2,442	13,903	617	2,104	386	611	3,718
1973 ..	9,022	2,750	11,772	1,618	525	2,143	17,006	3,250	20,256	15,644	3,537	19,181	1,359	2,922	328	301	4,910

provides fundamental information for planning purpose both at the national and state level. This data also provides information regarding the categories of workers that are in short supply or in surplus, which assists in the development of vocational training and also serves as a partial guide in framing other educational policy.

The Employment Market Information Unit started functioning since January 1, 1969. It has brought out 20 quarterly studies upto the quarter ending September 30, 1973. Under the Employment Exchange Compulsory Notification of Vacancies Act, 1959, 16 quarterly reviews have also been brought out from 1969 upto December 31, 1972. Besides 17 New Digest Quarterly Reports have also been brought out from 1969 to March 31, 1973. Under these area Market Reports, the following number of establishments both from Public and Private Sectors are covered.

			Response %
(1) Goa district	71	...	90%
(2) Central Government	33	...	100%
(3) Quasi Government	73	...	82%
(4) Local Bodies	11	...	100%
(5) Private	279	...	54%

State Advisory Committee on Employment

A State Advisory Committee on Employment has also been constituted in order to suggest the measures for creating more opportunities and also to suggest ways and means for the better performances.

STATE PLANS

After their political independence, most of the under-developed countries naturally looked to the economic welfare of their people. The Russian endeavour in Planning has inspired the imagination of many countries in the world. Being attracted by the idea of planning, the leaders of the Indian National Congress discussed the matter to make a construction programme for building up the country in their Karachi Session as early as 1931. In 1934, Sir Visveswarayya put forth some proposals (Visveswarayya Plan) which were essential for a planned economic development of a country. It was followed by 'Bombay Plan' in 1944 and 'Peoples Plan' thereafter. In the meantime, the Government of India appointed a Post-War Reconstruction Committee to devise schemes in order to meet both the short and long term problems facing the economy due to the war. On October 26, 1946, an Advisory Planning Board was appointed by the Interim Government to review the planning that had already been done by the Government with certain recommendations. The need for a planned economic

development was well realised after Independence. To formulate the plans and to translate their objectives, the Planning Commission was instituted by the Government of India in March 1950. The Commission presented to the public the Draft outline of the First Five Year Plan in July 1951. The First Five Year Plan covered the period from 1951-56, the Second from 1956-61 and the Third from 1961-66.

The Liberation of the territory of Goa, Daman and Diu was achieved in December 1961. As such, the planned economic development of the territory started in 1963. Since it has missed the benefits of the First, Second, and half of the Third Five Year Plans, its economic growth had been hindered and it needed special consideration to give it a great push for acceleration to catch up on the lost time. During the Third Plan Period, the Plan outlay was to the extent of Rs. 226·36 millions. Of the Plan outlay, the actual expenditure incurred came to Rs. 152·84 millions, which was 67·52 per cent of the Plan outlay. Out of the total expenditure incurred during the Third Plan as much as 16·59 per cent was incurred on agricultural programmes, 7·68 per cent on co-operative and community development, 15·69 per cent on irrigation and power, 3·18 per cent on industry and mining, 13·21 per cent on transport and communications, 41·24 per cent on social services and 2·41 per cent on miscellaneous items.

After the Third Plan in 1966, the economic conditions of the country forced the Government to resort to annual planning for three consecutive years upto 1969. During these three years the total plan outlay of three annual plans was placed at Rs. 2,406·83 lakhs of which an amount of Rs. 1,983·10 lakhs was actually spent. Of the actual expenditure of the plan outlay, expenditure to the extent of 17·53 per cent was incurred on agricultural programmes, 4·67 per cent on co-operative and community development, 18·84 per cent on irrigation and power, 3·80 per cent on industry and mining, 15·30 per cent on transport and communications, 35·80 per cent on social services and 4·06 per cent on miscellaneous items.

The following statement gives the sector-wise percentage increase or decrease of the expenditure incurred during the three annual plans over the one incurred during the Third Five Year Plan period :—

Agricultural Programmes	+ 37·03
Co-operative and Community Development ...	— 21·21
Irrigation and Power	+ 55·80
Industry and Mining	+ 55·46
Transport and Communications ...	+ 50·25
Social Services	+ 12·64
Miscellaneous Services	+ 118·75

The approved outlay of the Fourth Five Year Plan which commenced in April 1969 was to the tune of Rs. 3,950·00 lakhs. It is found that the estimated expenditure is likely to be more than the approved outlay and is placed around Rs. 4,177·80 lakhs. Of the expenditure, a lion's share is expected to go on social services, and it would be about 37·44 per cent. It will be followed by agriculture with 19·64 per cent, irrigation and power with 17·78 per cent, transport and communications with 16·56 per cent, co-operatives and community development with 4·61 per cent, industry and mining with 2·17 per cent and miscellaneous services with 1·80 per cent.

The cumulative approved outlay is placed at Rs. 8,620·43 lakhs. The actual cumulative expenditure by the end of March 1974 is expected to be around Rs. 7,689·30 lakhs. In the cumulative expenditure also, it is noticed that social services got the lion's share with 37·77 per cent. It is followed by agricultural programmes with 18·49 per cent, irrigation and power with 17·64 per cent, transport and communications with 15·57 per cent, co-operatives and community development with 5·24 per cent, industries and mining with 2·79 per cent and miscellaneous services with 2·50 per cent. In the cumulative effect it has been noticed that the actual expenditure is expected to exceed the total approved outlay to the extent of 5·74 per cent. It is expected to exceed by 54·41 per cent in respect of transport and communications, by 39·52 per cent in respect of miscellaneous services, by 24·26 per cent in respect of social services and by 38·90 per cent in respect of co-operatives and community development. In respect of the agricultural programmes the total expenditure would come to Rs. 91·69 per cent of the total approved outlay, in respect of Irrigation and Power 71·42 per cent and 73·45 per cent of the approved outlay in respect of Industries and Mines.

Level of Development by the end of the Fourth Five Year Plan

The Fourth Five Year Plan envisages to wipe out the food deficit of the country as far as possible. With this in view, various intensive schemes such as introduction of improved seeds, plant protection measures, use of fertilizers and improving the condition of the soil by soil testing, were taken up. The programme of mechanisation was also undertaken. The total production of food grains achieved in 1971-72 was 85,000 tonnes. During the year 1972-73, the production was placed around 87,000 tonnes. By the end of the Fourth Five Year Plan the production is expected to reach 95,000 tonnes, still leaving a deficit of about 30,000 tonnes.

SOIL CONSERVATION

During the Fourth Five Year Plan, the only item of work taken up in Goa under soil conservation was the repair and construction of the marginal land embankments which posed a serious problem as far as the production of rice in the low lying area was concerned.

It may be mentioned here that about 9,200 hectares of fallow land was brought to plough since after Liberation and in the Fourth Plan it was expected to protect about 6,000 hectares of Khajan land.

The following statement gives the physical targets and expenditure incurred on the scheme during the said Plan : —

Serial No	Plan No.	Name of Scheme	Length of embankments repaired (kms.)	Acreage protected (Ha.)	Expenditure incurred (Lakh Rs.)
1	III Plan ..	Soil Conservation, Construction of river embankments, protection of paddy lands.	140	6,600	32·24
2	Annual Plans	Do	50	2,600	18·57
3	IV Plan	Do.	89 90	3,732	29 39

During the year upto December 1974 an area of 220 hectares of agricultural land had been protected by embankment as against the target of 1,200 hectares. Under the Land Development Programme, an area of 1,000 hectares has been covered as against the target of 1,500 hectares fixed during the year. It is expected that the entire target of 1,500 hectares fixed under this programme will be covered. Similarly under protective afforestation, an area of 20 hectares has been covered so far.

CADASTRAL SURVEY

The target for cadastral survey scheme for Goa in the Fourth Five Year Plan was fixed at 280 villages out of 429 in the territory. Work in respect of 181 villages had been completed by the end of March 1973 and the work in respect of another 40 villages is expected to be completed by the end of March 1974. In respect of Record of Rights, the target was 150 villages of which work in respect of 104 villages was completed by the end of March 1973 and the work in respect of 50 villages is expected to be completed by the end of March 1974.

It was decided to complete the city surveys in respect of four municipalities mainly Margao, Panaji, Mapusa and Vasco-da-Gama during the Fourth Five Year Plan. However, the target is expected to be reached by the end of March 1977. During the Fourth Five Year Plan it was contemplated to complete the work of land classification in respect of 57 villages. The work in respect of 21 villages was completed by the end of March 1973. The work in respect of about 20 villages is expected to be completed by the end of March 1974.

ANIMAL HUSBANDRY

The salient feature of the Fourth Five Year Plan was the adoption of various measures to achieve the goal of self-sufficiency in milk, eggs and meat. With this in view, various measures such as the development of cattle, feeds and fodder, poultry and piggery were undertaken, besides schemes to provide health cover to livestock, training and education and Goa Meat Complex.

The developmental schemes which were under implementation during Fourth Five Year Plan were continued during the first year of the Fifth Five Year Plan with emphasis on cross breeding of cattle and training of lower cadre of staff and farmers in cattle management, health care and poultry keeping.

Dairying and Milk Supply

By the end of the Third Five Year Plan, procurement of milk from societies was around 3,500 litres per day. The figures reached 7,000 litres per day during the flush season of 1972-73. The Fourth Five Year Plan envisages to increase the procurement of milk to 10,000 litres per day.

FORESTS

In respect of forests, the Fourth Five Year Plan laid emphasis on conservation of forests, protection of forests, scientific management of forests, raising plantations of valuable and economic species of timber and rubber and cashew and opening of forest roads, with a view to achieving self sufficiency in meeting the demands of timber poles, firewood and other forest products of the local people for domestic, constructional and industrial purposes. It also envisages to implement the employment oriented schemes specially for the benefit of the rural folk who have suffered greatly during the foreign regime for want of adequate communication facilities and suitable employment. The scheme for the development of wild life was also undertaken during the Third Five Year Plan and continued during the Fourth Five Year Plan as most of the wild life in the district had been wiped out during the foreign regime.

FISHERIES

Of the total outlay of Rs. 135 lakhs fixed for fisheries development in the Fourth Five Year Plan of the territory, the expenditure during the first three years of the Plan has come to Rs. 54·68 lakhs. Under the scheme, "Mechanisation of Fishing Crafts", 39 engines have been distributed for fitting into the hulls constructed by the fishermen. Besides, loan and subsidy were given for the construction of 27 hulls. Three boats fitted with engines were given to the Fisheries Co-operative Societies. Under the powered fishing scheme, the Fisheries Department acquired two steam trawlers constructed by Goa Shipyard. These trawlers can fish only upto 25 fathoms depth. The construction of an estuarine farm for demonstrating brackish water fish culture was completed in 1972-73. The activities of the Fishermen Training Centre have been taken up from 1971-72 and 25 young fishermen are given training in modern fishing techniques at the Centre. The construction of a slipway is in progress. The fisheries jetty has been extended.

WAREHOUSING AND MARKETING

The Market Regulation Activity was started in the territory from May 1962 with the Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963, which was made applicable to the Union Territory Under the scheme, a district pattern Marketing Committee was formed with the headquarters at Margao. During the Fourth Five Year Plan, the Committee had a plan to establish one main yard at Margao and two sub-market yards; one at Ponda and the other at Sanquelim for trade of notified commodities, such as cement, arecanut and cashewnut. Under the scheme, the Government sanctioned an amount of Rs. 5·30 lakhs as loan and Rs. 17,332·00 as subsidy during the period 1969-72 to assist the Market Committee in its programmes. The Market Committee has purchased three sites valued at Rs. 3·29 lakhs and has completed first stage construction of two sub-yards at a cost of Rs. 3·67 lakhs. The first stage construction of the main market yard is expected to be completed by the end of March 1974.

CO-OPERATION

The total co-operative membership is expected to be 1·15 lakhs covering about 450 service, consumers, dairy, industrial, housing, credit, transport, fisheries, farming and processing and marketing societies by the end of the Fouth Five Year Plan. By the end of June 1972, the total annual average turnover of these societies amounted to Rs. 5·50 crores, the members' share capital to Rs. 80·46 lakhs and Government's contribution to Rs. 55·55 lakhs. The Co-operative Sugar Factory

registered on August 15, 1970, a project costing about Rs. 3 crores, has already been commissioned. At the beginning of the Fourth Five Year Plan, that is in 1969-70, there were 49 Primary dairy co-operative societies with a membership of 1,852 and a total paid-up share capital of Rs. 2·81 lakhs. The annual capacity of milk supply was 7·20 litres. The number of dairy societies has now risen to 68 with a membership of 3,323 and a paid up share capital of Rs. 5·72 lakhs. The annual milk supply capacity has gone up to 17·62 lakh litres. The Dairy Co-operative Union supervises and co-ordinates the working of all these primary societies and also functions as a liaison between the Government Milk Supply Scheme and milk producers.

The Goa Co-operative Fisheries Federation has an authorised share capital of Rs. 16·50 lakhs. The Goa Co-operative Printing Press registered on August 16, 1971, with a paid up share capital of Rs. 11,425·00 and a working capital of Rs. 95,000·00 has a membership of 106, and undertakes printing work of co-operatives and Government and Semi-Government agencies. The Goa State Co-operative Bank Ltd. Panaji, which is the apex financing agency, has shown a remarkable improvement in respect of share capital, deposits and loaning activity. The details in this respect are given in the following statement :—

(Amount in lakh Rs.)

Item	Position as on 30-6-1969	Position as on 30-6-1972
1. Total Membership	467	591
2. Total paid up share capital ..	13·14	16·84
3. Total Reserves and other funds ..	0·81	1·91
4. Total deposits	61·05	127·57
5. Loans outstanding—		
(*i*) Short term loan	34·55	75·58
(*ii*) Medium term loan	23·73	16·56
(*iii*) Long term loan	0·25	44·79
6. Financial results, accumulated losses/ profit.	(—)1·55	(+)1·78

The Co-operative Training Centre under the aegis of the Goa State Co-operative Bank has started functioning at Porvorim from December 1, 1972, to train Secretaries of Co-operative Societies. The two Urban Co-operative Banks, which were in existence at the beginning of the Fourth Five-Year Plan have made excellent progress during

the first three years of the Fourth Five-Year Plan. It is reflected in the statement that follows :—

(Amount in lakh Rs.)

Item	Position as on 30-6-1969	Position as on 30-6-1972
Goa Urban Co-op. Bank Ltd.		
1. Total Membership (No.)	3105	6588
2. Total paid up share capital	6·50	12.98
3. Total loans outstanding	44·22	110·46
4. Total reserves and other funds ..	2·33	4·71
5. Total profits earned during the year ..	0·65	2·44
Mapusa Urban Co-op. Bank Ltd.		
1. Total membership (No.)	608	1245
2. Total paid up share capital ..	2·52	5·10
3. Total loans outstanding	25·52	45·10
4. Total reserves and other funds ..	0·09	1·81
5. Total profits earned during the year ..	0·63	1·19

During the Fourth Five Year Plan, two more urban banks have been organised. The Margao Urban Co-operative Bank was registered on March 31, 1972, with an initial membership of 26 and a share capital of Rs. 14,600·00. By the end of February 1973, its share capital increased to Rs. 54,450·00. The other bank, mainly, the Women's Co-operative Bank Ltd., was registered on December 22, 1972, with an initial membership of 51 and a share capital of Rs. 22,050·00. It is the first institution of its kind in Goa. The Goa Central Co-operative Consumers' Stores, the apex wholesale unit in the consumers' Co-operative movement in the district of Goa was suffering huge losses. However, during the first three years of the Fourth Five-Year Plan, the position has improved considerably and accumulated losses have been reduced to Rs. 60,000·00. The Goa Transport and Tourist Co-operative Society was registered on May 3, 1973.

COMMUNITY DEVELOPMENT

The community development programme introduced in the rest of the country in October 1952 was extended to the territory in December, 1962. There are now 12 community development blocks in the territory, 10 in Goa district and one each in the northern districts of Daman and Diu. There are 188 village panchayats and the scheme for the training of the Panchayat Secretaries is being implemented. At the Block level, the developmental work under the

supervision and co-ordination of the Block Development Officer is entrusted to the various Extension Officers, like Extension Officers for Agriculture, Industries, Rural Engineering, Co-operation, Fisheries, etc. These are supplemented in the field of their speciality by the Mukhya Sevikas, Gram Sevaks and Gram Sevikas. The Blocks are also assisted by Block Advisory Committee presided over by a non-official member and consisting of the local M.L.A., the Sarpanchas and other persons nominated by voluntary organisations.

Upto November 1974, Rs. 46,000·00 from the Block funds have been disbursed to needy agriculturists for various purposes such as minor agricultural purposes, etc. Loans to the tune of Rs. 54,000 are expected to be disbursed from the Block funds by way of developmental loans during the financial year.

These loans are sanctioned to individual agriculturists for construction of wells, tanks, etc., and other improvement works of lands under the Goa, Daman and Diu Land Improvement Loan Rules, 1966 and for purchase of agricultural implements and machinery and work animals, for the planting and rearing of coconut, arecanut trees, etc. under the Goa, Daman and Diu Agriculturists Loan Rules, 1966.

An amount of Rs. 25,825·00 is expected to be spent during the financial year, on health and rural sanitation programme, by way of construction of public urinals, drinking water wells, drains and culverts.

Towards the development of rural arts and crafts, Rs. 6,900·00 are proposed to be spent during the financial year for the supply on 50 per cent subsidy basis, of improved tools and machines to various artisans. Construction and repairs of roads at an estimated cost of Rs. 22,800·00 and construction of quarters for Gramsevaks at a cost of Rs. 9,555·00 approximately is proposed to be undertaken.

Towards housing in rural areas, loans are granted to poorer villagers who desire to construct houses for residential purposes within an estimated cost of Rs. 6,000·00 per house. Rs. 1,28,000·00 has already been sanctioned to 33 villagers under this scheme upto November, 1974 and another Rs. 2,72,000·00 are expected to be sanctioned during the remaining period of the financial year.

In four of the Development Blocks, Applied Nutrition Programme is being operated. Under this programme, school gardens, community gardens and poultry units have been established, with a view to provide assistance and guidance in improved form food habits and encourage consumption of proteins rich food. School children, Balwadi children and expecting mothers are fed with products of school gardens and poultry units.

Besides the above Schemes which are directly implemented by the Blocks out of Community Development Funds, they also disburse the loans to agriculturists from out of funds of the Directorate of Agriculture placed at their disposal. Again, the Block Offices play a major role in identifying the marginal farmers and agricultural labourers and submit their loan cases to the Marginal Farmers and Agricultural Labourers Agency. An estimated amount of Rs. 4·30 lakhs is proposed to be spent on construction of Panchayat Ghars, market-*cum*-shopping centres, etc. in 1974-75.

IRRIGATION AND POWER

The major irrigation works are being undertaken in the territory for the first time. The Selaulim Project, the Dudhsagar Project, and the Tillari Project are the main projects to be taken for the benefit of the district of Goa. The Fouth Five Year Plan outlay for major irrigation schemes was to the extent of Rs. 300 lakhs. The expenditure was to be incurred on the execution of two major schemes of Selaulim and Tillari. As against this, an expenditure of Rs. 131·54 lakhs is expected to be incurred by the end of March 1974. The expenditure on the Selaulim Irrigation Project would come to Rs. 123·68 lakhs. An amount of Rs. 1·16 lakhs has been earmarked to be spent on survey and investigation by the end of the Fourth Five-Year Plan period.

FLOOD CONTROL AND ANTI-SEA EROSION SCHEMES

The Fourth-Five Year Plan Outlay for this scheme was Rs. 20,00,000·00. As against this, an expenditure of Rs. 24·14 lakhs, will have been incurred by the end of the Plan. Schemes that will be completed are :—

(1) Desilting and drainage of Taleigao Canal in Campal area, Panaji.

(2) Construction of sea-wall to arrest sea-erosion of the beach at Caranzalem.

(3) Construction of sea-wall at Cabo.

(4) Anti-sea erosion work at Reis-Magos.

POWER

At present no electricity is being generated in the Union Territory of Goa, Daman and Diu. Since the power is purchased from the neighbouring States, the works taken up by the territory are mainly of transmission and distribution. In the Goa district, 68 c.kms. of 110 KV line is in commission since 1966. The 110 KV sub-station at Panaji, with 90 MVA capacity is also in operation. By the end of the Fourth Five Year Plan, two more sub-stations at Pale (6·3 MVA)

and Canacona (0·5 MVA) are expected to be added to the network. With a view to meeting the additional future demand in Goa, the work has commenced on the 220 KV, D/C interstate line with one circuit strung from Kolhapur to Ponda, in the Fourth Five Year Plan. Under the programme on rural electrification, 186 villages out of 429 have been electrified, by the end of March 1973. By the end of the Fourth Plan period, 240 villages are expected to be electrified. The numper of domestic and commercial connections is expected to reach 48,880; industrial L.T. connections to 1,160; street lights to 7,400 and agricultural pumpsets, communications to 300 by the end of the Fourth Five Year Plan.

INDUSTRIES AND MINES

Considerable progress has been made in the establishment of small scale industrial units during the Fourth Five Year Plan. The number of registered small scale industrial units which stood at 389 at the beginning of the Fourth Five Year Plan, increased to 680 at the end of the fourth year of the Fourth Five Year Plan. The number of sophisticated units like pharmaceuticals, chemicals, engineering, food processing, plastics, etc., has gone up in addition to the traditional industrial units like rice and flour mills, saw mills, printing presses, etc. Eleven large and medium scale industrial units have also been set up during the plan period. Industrial estates have been set up at Corlim and St. Jose de Areal.

TRANSPORT AND COMMUNICATIONS

Goa is linked to its neighbouring states by all the modes of transportation namely, road, rail, sea and air.

Roads

The main transport needs are served by roads, inland waterways and ports. The length of surface roads in the district including rural roads has increased from 2,735 kms. in the Liberation period, to 3,834 kms. in 1970-71, while the density of road lengths increased from 738 kms. to 957 kms. per 1,000 sq. kms. during the same period, registering an increase of 30 per cent. The expenditure incurred on road development increased from Rs. 79 lakhs in 1965-66 to Rs. 188·44 lakhs in 1968-69, i.e. by 50 per cent, a part of it, of course, may be due to increase in costs of material and labour. The roads that were black topped, cement concrete and macadam surface altogether increased from 1,655 kms. in 1962-63 to 3,834 kms. in 1970-71, while black topped roads have increased from 421 kms. to 1,255 kms. or nearly 3 times over these 8

years; the macadam roads have increased from 1,224 kms. to 2,575 kms. or slightly more than two times, and cement concrete roads have decreased from 9·3 kms. to 4·0 kms. during the same period. In 1970-71, the black topped roads constituted 33·1 per cent, macadam roads 66·8 per cent and the cement 0·1 per cent of the total road length.

The following statement gives the trend of road development in the district of 1962-63 to 1970-71 :

Year		Black topped	Cement Concrete	Macadam	Total
		Kms.	Kms.	Kms.	Kms.
1962-63	..	421.6	9.3	1,224.1	1,655.0
1963-64	..	501.1	9.3	1,144.1	1,655.5
1964-65	..	416.5	2.0	1,472.1	1,890.6
1965-66	..	457.0	2.0	1,972.3	2,431.3
1966-67	..	704.4	2.0	1,733.8	2,440.2
1967-68	..	971.0	3.6	2,151.3	3,125.9
1968-69	..	950.0	5.0	2,325.0	3,280.0
1969-70	..	978.0	5.0	2,336.0	3,319.0
1970-71	..	1,255.0	4.0	2,575.0	3,834.0

The percentage of macadam roads has fallen from 74 in 1962-63 to about 67 in 1970-71, and this is mainly due to conversion of these roads into black topped roads.

RAILWAYS

There is only one railway line that is a metre gauge, running from Castle Rock to Mormugao Harbour for about 79 kms. The railway in the district handles passenger as well as goods traffic. The goods traffic is mainly of iron ore. During 1966-67, the railway in Goa handled a traffic of about 9,60,000 passengers and freight of about 15,500 tonnes. About 80 per cent of the freight traffic consisted of ores. Compared to the goods traffic handled in 1961, there was an increase

of 4 per cent per annum in the 1966-67 traffic. The passenger traffic was, however, decreasing due to competition from roads traffic.

AIR

Goa has one airport, with a runway having a length of 2387 metres, situated at Dabolim. The district of Goa is linked by air to Bombay and Mangalore in the neighbouring states of Maharashtra and Karnatak respectively. The following statement gives the growth in air traffic from 1962-63 to 1972-73.

Year		No. of Passengers	Excess baggage in kgs.	Mail in kgs.	Freight in kgs.
1962-63	..	7,567	7,220	30,100	24,337
1963-64	..	10,355	9,701	27,063	24,273
1964-65	..	25,527*	21,347	34,801	23,446
1965-66	..	14,824	14,076	46,301	28,821
1966-67	..	15,551	14,823	45,998	150,445
1967-68	..	16,164	15,712	43,712	185,337
1972-73	..	31,972 (+728)**	N.A.	N.A.	N.A.

*The increase in the passenger traffic this year was due to the exposition of the body of St. Francis Xavier when visitors from abroad and India flocked to Goa.

**Children.

Note.—Data from 1968-69 to 1971-72 are not readily avaiable.

MINOR PORTS AND INLAND WATERWAYS

In the district of Goa, inland waterways play a vital role in the transportation of minerals as it provides a much cheaper rate than any other mode of transport available in the district.

There are about 555 kms. of important inland waterways of which only 250 kms. are navigable.

During the Fourth Five Year Plan, a total provision of Rs. 112 lakhs was alloted for the development of which Rs. 15 lakhs was alloted for the development of minor ports and Rs. 97 lakhs for the development of inland waterways. Under the scheme of development of minor ports, the work of modernisation of light houses and navigational aids, construction of Panaji jetty and construction of Caranzalem wall were proposed. Under the development of inland water transport, the scheme of deepening and widening of Cumbarjua and expansion of marine workshop, survey of inland waterways, construction of new jetties, etc., were proposed. The anticipated expenditure under this scheme of minor ports and inland waterways during the Fourth Plan is Rs. 7,232 lakhs. The total provision of Rs. 14 lakhs was met during the Fourth Plan for the extension of marine workshop. By the end of the Fourth Five Year Plan, the total expenditure incurred on the scheme would be to the tune of Rs. 5·14 lakhs. An amount of Rs. 30 lakhs has been earmarked for the survey of inland waterways in the Fourth Five Year Plan. The work is in progress. However, it is expected to be completed by the end of the Fifth Five Year Plan. Under the scheme, one survey launch has been acquisitioned and it is hoped that the launch would carry out hydrographic survey during the Fourth Five Year Plan. Out of the total provision of Rs. 30 lakhs under the scheme, the total expenditure incurred would come to about Rs. 29·03 lakhs. The total provision of Rs. 6·50 lakhs was made for the construction of new jetties and drums. By the end of the Fourth Five Year Plan, the total expenditure incurred on the scheme would come to about Rs. 5·22 lakhs. An expenditure of Rs. 1·24 lakhs would be made as against the provision of Rs. 2·5 lakhs on passenger sheds and other amenities. A provision of Rs. 19 lakhs was made for the construction and purchase of new ferries and launches. The anticipated expenditure by the end of the Fourth Five Year Plan would come to Rs. 13·99 lakhs.

TOURISM

Goa has always been a tourist's paradise. The district has attracted a large number of tourists both from India and abroad, mainly for its scenic beauty, famous beaches and ancient temples, churches and mosques and the various festivals attached to them.

Information is not available on the tourist traffic prior to Liberation. However, since 1967, the Tourist Department maintains records about the tourist trend in the district.

The following statement reveals the tourist trend in Goa from 1967 to 1970-71 :

Year	Indian	Foreign	Total
1967	52,620	4,045	56,665
1968	66,748	4,725	71,473
1969	78,556	5,706	84,262
1970-71	1,01,850	4,857	1,06,707

It is seen from the above statement that the number of tourists has been increasing rapidly every year. The number of tourists has increased from 56,665 to more than 1,00,000 during these years. However, the number of foreign tourists are comparatively small though it is a significant proportion of the foreign tourists visiting India.

During the Fourth Five Year Plan, an outlay of Rs. 26 lakhs had been sanctioned for the development of tourism in the territory. During the Fifth Plan Period, an outlay of Rs. 185 lakhs has been fixed to provide accommodation and additional facilities to visiting tourists.

The accent of the development of tourism is on the conversion of the district into a seaside resort and on accommodation as it has been noticed that many tourists visiting Goa, cut short their visit to a bare minimum due to scarcity of accommodation facilities. Flood lighting on permanent basis has been provided on the main beaches of Calangute, Colva, Gaspar Dias (Miramar) and Siridao and at the monuments at Old Goa. At Dona Paula, the rock garden has been further beautified. A children's park in Campal, Panaji, was inaugurated in November 1972. An Information Centre was set up at Vasco-da-Gama in November 1971. Arrangements have also been made to provide transport facilities for sight seeing. Two tourists cottages have already been constructed in the Bondla Wild Life Sanctuary. A tourist information centre has been recently open, on May 20, 1975, at the Bombay Central Railway Station to guide the increasing tourist traffic to Goa.

EDUCATION

Primary and Secondary

At the beginning of the Fourth Five Year Plan there were 715

primary schools. Besides, 180 middle schools and 95 high schools had primary classes attached to them. By the end of the Fourth Five Year Plan there will be 800 primary schools besides 190 middle schools and 100 high schools with primary classes attached to them. The enrolment at the primary level stood at 94,500 at the beginning of the Fourth Five Year Plan. At the end of the Plan it is expected to reach 1,12,000. The number of teachers will also increase from 4,300 to 4,800 of whom 70 per cent would be trained teachers.

At the beginning of the Fourth Five Year Plan there were 193 middle schools in addition to 194 high schools with middle schools attached. By the end of the Fourth Plan the number of middle may rise to 200. The number of high schools having middle classes is expected to be 175 by the end of the Fourth Five Pear Plan. The enrolment which stood at 37,500 at the beginning of the Fourth Plan is likely to go up to 45,500 by the end of the Plan. At the beginning of the Fourth Five Year Plan, the total enrolment of second classes was approximately 23,000. It is expected to rise to 38,000 by the end of the Fourth Five Year Plan

Social Education

During the Fourth Five Year Plan 285 centres for the eradication of illiteracy were opened in 1972-73 with an enrolment of 8,800 adult illiterates. The total number of illiteracy centres at the end of the Fourth Five Year Plan is likely to be 609 with the enrolment of about 2,000 adult illiterates. A number of books have been added to the collection of books in the Central Library. By the end of the Fourth Five Year Plan the total cost of the books added to the Central Library will be Rs. 2·33 lakhs. The Government have given a grant to the extent of Rs. 35,000·00 to 15 libraries in 1972-73. During the Fourth Plan period, upto the year 1972-73, 700 educational film performances were shown for the benefit of school children and the general public by the audio-visual unit by the Directorate of Education.

Technical Education

At present there is one Engineering College, one Polytechnic, one Technical High School, two Multi-Purpose High Schools and two Technical High School Centres cater to the needs of technical education to the people of the territory.

Physical Education

During the Fourth Five Year Plan, most of the High Schools in the territory were provided with trained teachers in physical education.

Besides, grants are given to Bharat Scouts and Guides Association, for the construction of stadia and pavilions, for introduction of National Service Scheme and National Sports Organisation. The scheme for Sports Talent Search was implemented in the territory for the first time in 1972-73 and ten students were awarded scholarships at the rate of Rs. 300·00 per annum. Two outstanding sportsmen were recipients of State awards in 1972-73 for special talent in sports and games.

HEALTH PROGRAMMES

As on April 1, 1973, there were 25 Government hospitals including 2 hospitals aided by Government and 12 hospitals attached to Primary Health Centres. The total bed strength of these hospitals during the same year was 2,076, giving an increase of 238 beds during the Fourth Five Year Plan period. During the Fourth Plan an Infectious Diseases Hospital with 40 beds at Ponda, and a Mobile Eye Clinic were started, while the activities at the other hospitals were increased considerably.

Primary Health Centres

During the Fourth Plan period, the previously existing Health Centres and Cottage Hospitals were converted into 15 Primary Health Centres and 4 Urban Health Centres with 5 sub-centres.

Control of Communicable Diseases

All the programmes under this scheme that were started before the Fourth Plan have been successfully implemented during the plan. Vaccinations, survey education and treatment for the various diseases have been carried out among a large section of the population. The communicable disease programmes covered include Malaria Eradication, Filaria Control, T.B. Control, Small Pox Eradication, Venereal Disease Control and Leprosy Control Programmes.

Family Planning

The birth rate which was 29 per thousand population in 1968-69 was brought down to 25 by 1972-73. The birth rate in 1971 in the territory was 24·8.

Maternal and Child Welfare, School Health and Health Education Programmes were among other programmes advanced during the Fourth Five Year Plan.

Goa Medical College

In the Fourth Five Year Plan it was envisaged to complete the Goa Medical College complex. Land admeasuring 77 hectares has been acquired for the purpose at Bambolim. The construction of a number

of buildings has already been completed. The total amount spent on the Bambolim project upto March 31, 1973, came to Rs. 64 lakhs. Besides, an amount of Rs. 20 lakhs has been spent on other schemes such as student nurses quarters at Ribandar, Urban Health Centre at Calapur, Hostel for house surgeons at Mandur, hostel building of Medical College of Panaji, etc. By the end of March 1973, an amount of Rs. 5·54 lakhs had been spent on the purchase of equipment.

WATER SUPPLY AND SANITATION

The approved outlay in the Fourth Five Year Plan for the scheme of water supply and sanitation was of Rs. 411 lakhs against which an expenditure to the extent of Rs. 5·26 lakhs is expected to be incurred by the end of the Fourth Five Year Plan. By the end of the Fourth Five Year Plan, 11 towns and 65 villages will get piped water supply. Under sewerage schemes, sewerage and sewerage treatment plant to Panaji towns has been committed and commissioned during the Fourth Five Year Plan.

HOUSING

The Goa, Daman and Diu Housing Board was entrusted with the following types of housing schemes during the Fourth Five Year Plan :—

1. Land acquisition and development scheme.
2. Low-income group housing scheme.
3. Middle-income group housing scheme.
4. Slum clearance scheme.
5. Subsidised industrial housing scheme.

An amount of Rs. 85 lakhs was ear-marked for this scheme.

Under the Village Housing Scheme to be implemented by the Collector of the district, 270 houses will be constructed in 200 select villages. An amount of Rs. 10 lakhs has been earmarked for the same. The expenditure by the end of March 1973 would be Rs. 5·20 lakhs.

Town and Country Planning

The only Plan scheme under Town and Country Planning was to prepare the base maps for the area in Bardez, Tiswadi, Salcete, Mormugao, Quepem and Sanguem. The work was entrusted to the Survey of India at an estimated cost of Rs. 7 lakhs.

LABOUR AND LABOUR WELFARE

During the Fourth Five Year Plan, 2 offices of Labour Inspectors were set up, one at Bicholim and the other at Margao. The Labour Welfare Centres have also been established at these places. Three

more Labour Welfare Centres, one each at Vasco-da-Gama, Ponda and Curchorem, will be established by the end of the Fourth Five Year Plan.

Statistics and Evaluation

During the Fourth Five Year Plan period from 1969-70 to 1972-73, important schemes such as strengthening and creation of a unit for resources of planning, irrigation and power, statistics training programme, machine tabulation, preparation of Municipal Year Book and survey of goods traffic by road, were implemented.

Information and Publicity

The total outlay for the Fourth Five Year Plan for the schemes on information and publicity was to the extent of Rs. 17 lakhs. During the first four years of the Plan, the expenditure has been incurred to the extent of Rs. 17·51 lakhs on community listening sets, tours of journalists, advertisements, production of publicity material, field publicity, setting up of dark room and song, drama and dance festivals.

Local Bodies

During the Fourth Five Year Plan, an amount of Rs. 30 lakhs was provided for the development of local bodies. However, the expenditure is expected to go up to Rs. 41·72 lakhs by the end of the Fourth Five Year Plan.

ARCHIVES AND ARCHAEOLOGY

Archives was included under the Plan schemes only by the end of the second year of the Fourth Five Year Plan and an amount of Rs. 3 lakhs was provided for the scheme. During the Fourth Plan period, Archaeological wing has been added to Archives and a museum has also been set up.

FIFTH FIVE YEAR PLAN

The approved outlay for the Fifth Five Year Plan would be around Rs. 8,500 lakhs. The outlay would be divided into : Agricultural programme, Rs. 1,418 lakhs (16·68 per cent); Co-operative and Community developments, Rs. 151 lakhs (1·78 per cent); Irrigation and Powers, Rs. 3,212 lakhs (37·79 per cent); Industry and Mining, Rs. 205 lakhs (2·41 per cent); Social Services, Rs. 2,398 lakhs (28·21 per cent); Transport and Communications, Rs. 914 lakhs (10·75 per cent); and Miscellaneous Schemes, Rs. 202 lakhs (2·38 per cent).

The following table gives in a nutshell, the approved outlay and actual expenditure during the Third Five Year Plan, Annual Plan from 1966 to 1969 and the Fourth and Fifth Year Plans :

APPROVED OUTLAYS AND ACTUAL PLAN EXPENDITURE SINCE INTRODUCTION OF

(Rs. in lakhs)

Serial No.	Name of the sector	Third Five Year Plan 1962-66		Percentage of col. 4 to col. 3	Annual Plan 1966-67, 1967-68 and 1968-69	
		Approved outlay	Actual expenditure		Approved outlay	Actual expenditure
1	2	3	4	5	6	7
1	Agricultural programme.	405·50 (17·51)	253·60 (16·59)	62·54	518·43 (22·37)	347·55 (17·53)
2	Co-operative and Community Development.	128·00 (5·66)	117·40 (7·68)	91·71	92·15 (3·83)	92·48 (4·67)
3	Irrigation and Power ..	333·00 (14·71)	239·80 (15·69)	72·01	430·97 (17·91)	373·62 (18·84)
4	Industry and Mining ..	140 50 (6·21)	48 50 (3·18)	34·31	104·73 (4·35)	75·40 (3·80)
5	Transport and Communications.	409·40 (18·09)	202·00 (13·21)	49·28	331·06 (13·76)	303·54 (15·30)
6	Social Services ..	769 90 (34·01)	630 30 (41·24)	81·87	808·89 (33·61)	710·01 (35·80)
7	Miscellaneous ..	77·30 (3·41)	36·80 (2·41)	47·60	100·60 (4·17)	80 50 (4·06)
	Total ..	2263·60 (100·00)	1528·40 (100·00)	67·52	2406·83 (100 00)	1983·10 (100·00)

PLANNING IN THE TERRITORY OF GOA, DAMAN AND DIU.

(Rs. in lakhs)

Percentage of col. 7 to col. 6	Fourth Five Year Plan 1969-74 Approved outlay	Fourth Five Year Plan 1969-74 Actual expenditure	Percentage of col. 10 to col. 9	Total approved outlays (col. 3 +6+9)	Total anticipated expenditure (col. 4 +7+10)	Percentage of col. 13 to col. 12	Approved outlays of five year plan
8	9	10	11	12	13	14	15
64·56	894·70 (22·65)	820·32 (19·64)	91 69	1838·63 (21·33)	1421·47 (18·49)	71·31	1418·00 (16·68)
100·43	138·70 (3·51)	193·66 (4·61)	138 90	358·85 (4·16)	403·54 (5·24)	112·18	151·00 (1·78)
86·68	1040·00 (26·33)	742·75 (17·78)	71·42	1803·97 (20 93)	1356·17 (17·64)	75·18	3212·00 (37·39)
72·01	123·60 (3·13)	90·79 (2·17)	73·45	368·83 (4·28)	214·69 (2·79)	58·21	205·00 (2·41)
91·66	448·00 (11·34)	691·75 (16·56)	154·41	1188·46 (13·79)	1197·29 (15·57)	100·74	914·00 (10·75)
87·77	1251·10 (31·67)	1563·33 (37·44)	124·96	2829·89 (32·83)	2903·64 (37·77)	102·61	2398·00 (28·21)
80·02	53·90 (1·37)	75·20 (1·80)	139 52	231·80 (2·68)	192·50 (2·50)	83·04	202·00 (2·38)
82·40	3950·00 (100·00)	4177·80 (100·00)	110·81	8620·43 (100·00)	7689·30 (100·00)	89·19	8500·00 (100·00)

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CHAPTER 10—GENERAL ADMINISTRATION

HISTORICAL BACKGROUND

During the major part of the Portuguese rule over the district, the Administration was of a typical colonial type, and the main Institutions which formed the basis of the Administration were the Factory (Feitoria), the Fort (Fortalezas), the Friar or vicar (Vigário) and the Fleet (Armada).

During the early part of the Portuguese rule Goa was governed by the Viceroy with almost absolute powers over all the branches of Administration—Civil, Military and Judicial. The title of Viceroy of India was changed to that of Governor and Captain General of India.[1] The title of Viceroy was again revived in 1814 and continued till 1835 when the Governor Generals were appointed for the Overseas Provinces of the Portuguese Empire and this practice continued till Liberation.

Under the Constitutional Regime, the District of Goa was divided into 2 divisions namely Old Conquests (Velhas Conquistas) and New Conquests (Novas Conquistas). The Old Conquests were further sub-divided into three councils of Administration (Concelho da Administração) namely the Goa Island Tiswadi, Salcete and Bardez. Concelhos were further divided into Parishes (Freguezias) or 'Regidorias', ninety-eight in all. Every 'Concelho' was placed under the charge of functionary called Administrator (Administrador) who was appointed by the Governor General. He was also the head of the municipality of that taluka. Every parish had a minor council called 'Junta de parochia' headed by a magistrate called 'Regidor' who was responsible for general and police administration. These three Concelhos were established from September 1837.

In the New Conquests, the 'Intendente Geral' was the Chief Administrator of the talukas with wider powers. He was replaced by an Official called 'Encarregado Fiscal' in 1838 converted into 'Administrative Fiscal' in 1841. The Civil Administration of the Portuguese possessions in India was governed by the Administrative Code of 18th March, 1842 as altered by the 'Provincial Portaria' of 6th August, 1847. It was further modified by the decree of 1st

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[1] Xavier F. N., Instrução, Nova Goa 1903, p. 64 and No. 247.

December, 1869. The administration was carried according to the Code of 1869 till the Republic of 1910.

Portuguese possessions in India were to be granted provincial autonomy in 1917. But it did not materialize then. Changes were introduced in the constitution of the Government Council. However, again in May 1919 the Charter of 1917 was re-established, when the Liberal regime came in power in Portugal.

Soon after the establishment of the Dictatorial Regime in Portugal in 1926, a New Charter was promulgated for the administration of the Portuguese possessions in India. The administration was dealt with by the Cabinet Secretariat and the State Secretariat which was named as the Directorate of Civil Services, with their headquarters at Panaji.

In 1951, the Colonial Act was incorporated in the Constitution of 1933 and the nomenclature of Colonies was changed into 'Ultramar' overseas Portugal. In 1953, new law was promulgated laying down basis of administration of Overseas provinces (Lei Organica do Ultramar Portugues 27th June). As provided under these Laws a Statute was passed in 1955 for the administration of the Portuguese possessions in India. Under this Statute, the Governor General was to be assisted by the Legislative Council, and the Government Council with its permanent Section The Legislative Council was to be composed of 23 members, eighteen elected and five nominated.

The Government Council included Secretary General, Military Commander, Attorney General, Director of Fazenda and two members elected by the Legislative Council. The Cabinet Secretariat and the Directorate of Civil Services dealt with the Secretariat work.

In the description that follows in this chapter and in chapters 11 to 17, the departments of the State Government at the district level are grouped as follows :

Chapter 11--Revenue Administration.
Chapter 12--Law and Order and Justice.
Chapter 13—Other Departments.
Chapter 14—Local Self Government.
Chapter 15-Education and Culture.
Chapter 16—Medical and Public Health Services.
Chapter 17—Other Social Services.

Present Administration

The Union Territory of Goa, Daman and Diu is divided into three districts namely Goa, Daman and Diu. As per the census of 1971 the

total population of Goa, Daman and Diu is 8,57,771. The district of Goa accounts for 7,95,120 souls i.e. as many as 92·69 per cent of the population of the territory.

COLLECTORATE

The area of Goa was constituted into a district in 1965[1], and the first Collector of Goa took charge on March 29, 1965. The deputy Collectors and Mamlatdars were appointed earlier in February 1965, 2 Deputy Collectors for 2 divisions of the district, namely North Division and South Division. The Mamlatdars replaced the Concelho Administrators of the Portuguese Regime. In the initial stages, the Collectors and Mamlatdars had the powers to perform the duties of the Goa, Daman and Diu Agricultural Tenancy Act, 1964, which came into force from February 8, 1965. The Mamlatdars were appointed as Administrators of their respective talukas with a view to facilitating the performance of their functions under the Old Portuguese laws.

Executive Functions of the Collector

The Collector has been declared as Head of the Department.[2]

The administration of Goa district at district level is conducted by the Collector of Goa who also functions as District Magistrate. He is also the District Development Officer of Goa district, and as such, co-ordinates the activities and exercises general control over the Block Development Officers and various Development Departments in the District which are under government control of the Development Commissioner. He is authorised to grant loans under the Low Income Housing Scheme and the Middle Income Housing Scheme. The functions of the Lieutenant Governor under the Village Panchayat Regulation 1962, have been delegated to the Collector. The powers of the Lieutenant Governor under the various sections of the Code of Comunidades and Temple Regulations have also been delegated to the Collector in his capacity as the Director of Civil Administration. He is also the Ex-Officio Director of Civil Supplies and Price Control. He works as the Ex-Officio Director of Social Welfare and as the Director of Land Survey.

The Collector of Goa has been designated as Returning Officer in the Panaji and Mormugão Parliamentary Constituencies and the Deputy Collectors have also been designated as the Assistant Returning Officers for the same constituencies. The Deputy Collectors have also been designated as Returning Officers and Electoral Registration

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[1] By Notification No. GAD-EST-1265, dated 29th March, 1965.

[2] By Govt. of India, Ministry of Home Affairs, Letter No. 3/33/65, dated 23rd July 1965.

Officers for 14 Assembly Constituencies each in their respective jurisdictions and the Mamlatdars as the Assistant Returning Officers and Assistant Electoral Registration Officers.

Magisterial Functions

As a District Magistrate, the Collector of Goa is empowered to try, in a summary way, cases of offences relating to contravention of orders made under section 3 of the Essential Commodities Act, 1955, in Goa area. The Deputy Collectors were appointed as Magistrates of the Second Class for their respective jurisdictions. The Collector of Goa is responsible for the internal distribution of foodgrains and essential commodities, preparation of ration cards, local procurement of foodgrains and essential commodities, inspection of fair price shops and enforcement of Government control orders and is assisted by the Inspectorate of field staff, transferred under the Collector's control from August 1, 1965. Government delegated its powers under section 13 of the Code of Criminal Procedure to the District Magistrate of Goa. The Mamlatdars were further invested with powers under section 164 of the Code of Criminal Procedure, 1898, to record statements and confessions. The Collector of Goa is also the District Registrar of Births and Deaths and has also to discharge various functions under the Goa, Daman and Diu Municipalities Act, 1968, so far as the Municipal Councils in Goa are concerned. Except in Municipal areas where the respective Municipal Councils have adopted the requisite bye-laws, the Collector, in his capacity as the Director of Civil Administration, grants the required permission for starting commercial activities.

Revenue Functions

The Collector of Goa and the Deputy Collectors have been authorised for their respective jurisdictions to perform the functions of the competent Authority under the Requisitioning & Acquisition of Immoveable Property Act, 1952. The Deputy Collectors have been authorised to exercise the powers and perform the duties of the Competent Authority under the Defence of India (Requisitioning and Acquisition of Immoveable Property) Rules, 1962. The relevant provisions of the Defence of India Act, 1962, relating to requisitioning and acquisition of immoveable property were replaced by the Requisitioning & Acquisition of Immoveable Property (Amendment) Act, 1968, which came into force from 10th January, 1968.

The Collector was the Chairman of the Claims Committee to scrutinize claims arising out of the damage caused to the properties due to the explosion of bridges on December 18th/19th, 1961, and for the supplies to the former Government. For a short while, the

Custodian of Evacuee Property was appointed as the Chairman for this territory. However, the Collector has again taken over as the Chairman of the Committee.[1]

The Collector is controlling the work of acquisition of land for various Government Departments. He also performs the functions under the Land Acquisition Act, 1894. The powers under the Agricultural Tenancy Act, 1964, have also been delegated to the Collector. He is also empowered to exercise all the functions of the Lieutenant Governor regarding resumption of land and matters relating to the same in his jurisdiction. The Collector supervises the work of Cadastral Survey and various other schemes like the City Survey and Soil Classification.

The Deputy Collectors have been appointed as Estate Officers under the Public Premises (Functions of unauthorised occupants) Act, 1958. The Mamlatdar of Mormugao Taluka has also been appointed as Estate Officer under the Estate Act within the local limits of his jurisdiction. The Collector of Goa, the Mamlatdar of Panaji and other heads of Taluka Revenue Offices have been respectively appointed as Collector, Superintendent of Stamps and Proper Officers under the Indian Stamp Act, 1899. All the functions of the Lieutenant Governor regarding leasing of Government lands on annual basis and matters relating to the same have been delegated to the Mamlatdars for their respective talukas.

Planning and Development functions of the Collector

Planning and Development activities have assumed increasing importance in the field of public administration in recent times. The Collector is the District Development Officer and in this capacity he has to co-ordinate and supervise the development activities in the District through the Block Development Officers of the Community Development Blocks. The major development activities comprise Agriculture and Animal Husbandry, Irrigation, Health and Rural Sanitation, Village Housing Schemes, Applied Nutrition Programme, Crafts and Industries, etc.

For the administration of development activities, the Goa district is divided into Blocks and Panchayats and the development policies are implemented by the Block Development Officers, who in turn are assisted in their work by various Extension Officers for Agriculture, Industries, Fisheries, Co-operation, Rural Engineering, etc. These are supplemented by the Mukya Sevikas, Gram Sevaks and Gram Sevikas. At present there are ten development blocks in the district. The Blocks are also assisted by Block Advisory Committee presided over

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[1] Vide Govt. Notification No. HD 33-16015/65, dated 11th July, 1966.

by a non-official member and consisting of the local Member of the Legislative Assembly, the Sarpanchas and the other persons nominated by voluntary organisations.

Apart from the normal work of disposal of Tenancy and other judicial cases, recovery of Government dues, grant of licences, Community Development, etc., the Collectorate has made many noteworthy contributions to the Administration and Development of the territory. A few of them are described below.

Elections and Opinion Poll

The Department conducted the Opinion Poll of 1967 and the General Elections of 1967 to the Assembly and Parliament, and also the General Elections of 1968 to the Village Panchayats and bye-elections which took place from time to time.

Land Acquisition

The officers of the Department finalised a number of acquisition cases. The details regarding the same are given in the statement that follows :

Area in Hectares

Year	No. of cases	Area of land acquired	Amount of compensation determined
1	2	3	4
			Rs.
1965-66 ..	7	188·4400	10,44,753·64
1966-67 ..	7	4·1082	2,20,732·32
1967-68 ..	18	39·7018	33,05,821·92
1968-69 ..	32	519·1643	59,18,213·07
1969-70 ..	46	174·8404	40,92,298·00
	110	926·2547	1,45,81,818·95

In addition to the normal acquisition work for regular developmental schemes, a special scheme for Selaulim Irrigation Project has been undertaken and lands are being acquired through a Special Land Acquisition Officer. During the year 1973-74, 74,09,475·89 square metres of land in 45 cases have been acquired and a total of Rs. 1,04,00,000·00 has been awarded. This includes the 18,32,787 square metres of land acquired for the above Project at a cost of nearly Rs. 25,00,000·00.

The following statement gives the area of lands which were leased out by the erstwhile Government but which were not brought under cultivation within the stipulated period, reverting to the Government by the Collector during the period ending 31st December, 1969 :

Taluka		Area of reverted Government lands
Satari	...	90·3326 hectares
Canacona	...	2·5399 hectares
Sanguem	...	131·2423 hectares
Pernem	...	118·0650 hectares
		342·1798 hectares

During the period 1st April 1974 to 31st December 1974, 150·78 hectares of Government land was reverted to the Government where conditions of grant were not fulfilled. Action for redistribution of this land to the landless persons is under way.

Forest area of about 135 hectares in Canacona taluka and about 55 hectares in Sanguem taluka was released in 1969, by the Forests Department for allotment for cultivation purposes. Similarly, the Committee appointed to go into the availability of forest lands for cultivation purposes, released the following additional forest area for cultivation purposes :—

1.	Pernem Taluka	...	21·3000 hectares
2.	Satari Taluka	...	482·0852 hectares
3.	Ponda Taluka	...	15·0000 hectares
4.	Sanguem Taluka	...	101·0000 hectares
5.	Quepem Taluka	...	14·0000 hectares
6.	Canacona Taluka	...	25·6827 hectares
			659·0679 hectares

From the above areas and also from the other areas available for allotment, the following areas have been alloted according to Government policy to landless persons by the Mamlatdars upto the end of December, 1969 :—

Taluka		Area Allotted	No. of families benefitted
1		2	3
1. Pernem	...	32·00 hectares	118
2. Satari	...	734·00 hectares	895
3. Ponda	...	17·00 hectares	9
4. Sanguem	...	198·00 hectares	150
5. Canacona	...	150·98 hectares	115
		1,131·98 hectares	1,287

During the period from 1st April 1974 to 31st December 1974, 288·27 hectares of land were granted to the landless persons and persons belonging to the backward classes, ex-servicemen, etc., benefitting 355 families in the territory. Besides the land granted for agricultural purposes, 6·37 hectares have been granted for construction purposes for public utility such as schools, markets, Microwave Projects, etc. and 7·28 hectares were granted for grazing purposes to the Animal Husbandry and Veterinary Services Department.

The following statement gives information regarding grant of loans for construction of houses under Low and Middle Income Group Schemes since beginning, when the schemes were taken up for execution till 1973-74 :—

Scheme	No. of houses built	Amount of loan sanctioned.
		Rs.
1. Low Income Group ...	46	6,52,000·00
2. Middle Income Group ...	48	12,16,000·00
	94	18,68,000·00

* * *

CHAPTER 11—REVENUE ADMINISTRATION

REVENUE AND FISCAL INSTITUTIONS (FAZENDA)[1]

During the early period of the Portuguese expansion, Factory (Feitoria) was the main centre of their revenue and commercial management. The Factor (Feitor) was its head. After the conquest of Goa, a Local Chief was appointed in charge of the Collection of Revenue and Customs of Tiswadi in the island of Goa. He is referred to as Captain of the City or 'Tanador-mor' in the Orders of 1515 regulating the collection and accounting of taxes and duties. In 1517 (28th March) the Controller of Revenue, Accounts and Supplies (Vedor da Fazenda) was sent to India with wide powers on economic and financial matters of the State. His jurisdiction extended over dockyards (Riveira), the Arsenal and Stores (Armazem), enrollment of naval staff, their payments, etc. (Matricula Geral) too. Thanadars, Factors, Customs Officers and Captains of Fortresses were subjected to his authority. The Accounts administration was carried on in the House of Accounts (Casa dos Contos) which was headed by the Superintendent of Accounts (Provedor-mor) and was later on replaced by 'Provedor' or 'Vedor Geral da Fazenda'. The Board of Accounts or 'Mesa e Tribunal dos Contos', was a tribunal for all financial matters of the State and was given a Special Regimento in 1589. During the 16th century there were three 'Vedores', one in charge of Accounts, the other looked after supplies to fortresses and the one at Goa toured with the Viceroy. The system of 'Vedores' and 'Feitorias' continued till 1613 when it was substituted by the Council of Fazenda and 'Vedor Geral da Fazenda'. In the 18th century during the regime of the Prime Minister Marques de Pombal, the entire administration of the Portuguese State of India was oriented. Under Royal Order of 1769 (10th April) both the Council of Fazenda and House of Accounts were abolished and the financial administration was placed under the supervision of the Royal Board (Junta Real da Fazenda). The House of Accounts was replaced by a new office of 'Contadoria' with one Accountant and four other officers. The Secretary of the Board was appointed as Chief Treasurer (Tesoureiro Geral). In 1773 (3rd April) the post of the

[1] Gune V. T., "An Outline of the Administrative Institutions of the Portuguese territories in India and the growth of their Central Archives at Goa, 16th to 19th century A.D." in *Studies in Indian History* (Dr. A. G. (Pawar Felicitation Volume) Kolhapur 1968, pp. 71-74.

'Vedor da Fazenda' was abolished and his charge of the offices of naval establishments (Riveira) and Store (Armazem) was transferred to a new officer, Chief Superintendent of Marine (Intendente Geral da Marinha). In 1774 the Board of the Fazenda was constituted with Governor as its President, and Chief Judge of the State (Ouvidor Geral do Estado), Judicial Magistrate of Goa (Juiz de Fora de Goa) as attorney of the Crown and Fazenda and Secretary who was also Chief Treasurer (Tesoureiro Geral) as members. The Office of the Junta was shifted to Panaji in 1819 along with 'Contadoria' and Treasury. It continued to function till 1888 (20th December). Under Constitutional Regime it was replaced by the Commission of Fazenda during 1835-36 but was re-established in 1837. Under order of 20th December 1886, the administration of Revenue and Accounts was reorganized. The 'Contadoria Geral' was abolished in 1888 and new Provincial office of Fazenda was created which was headed by the Inspector of Fazenda. The powers of sanctioning expenditure were vested in the Governor General. In 1892, new Tribunal of Accounts presided over by the Governor General was created. The Inspector of the Fazenda worked as its Secretary. It functioned till 1898 when its internal financial matters were passed on to Provincial Council and the work of Audit of Accounts was transferred to the Metropolitan Tribunal of Accounts. In 1900, important changes were introduced in the working of the system of Fazenda (Decrees of 14th September 1900 and 3rd October 1901). In Portugal, Office of the Inspector General of Overseas Fazenda was newly created and thus control of the financial matters of the Colonies was entirely centralised. The functions of the Chief Treasurer were transferred to National Overseas Bank (Banco Nacional Ultramarino).

In 1879 (29th December), 6 Subordinate 'Concelho' offices of Fazenda were created with headquarters in the talukas of Bardez, Salcete, Pernem, Bicholim, Ponda and Quepem. These were governed according to the instructions of the Board of Fazenda dated 12th January 1880. Offices at Sanguem and Canacona were opened in 1883, at Bicholim in 1902 and Satari in 1907.

After the establishment of the Republic, Law No. 278 dated 15th August 1914 was promulgated which dealt with financial administration of the Colonies and its decentralisation.

Under the Charter of 1917 (30th March), the Portuguese possessions in the Portuguese State of India were granted administrative and financial autonomy and the Directorate of the Fazenda was created. In 1920 by the decree of 22nd January and 18th November, the Secretariat of the Auditor of the Fazenda was created. It regulated the services of Auditor General, Council of Finance and Fiscal Audit

(Auditoria Fiscal). However, ultimate financial control was left with the Central Government and was administered in the office of the Directorate General of the Fazenda of Colonies. Fiscal Auditor controlled the receipt and expenditure of the State and supplied necessary information to its counterpart in Portugal. The Council of Finances sanctioned the expenses. This system continued for a short period and in 1923 (5th March) the Auditor General's Office was abolished. Its functions were virtually transferred to Colonial Council and later on to Superior Council for Colonies. Fiscal Auditor's Office was abolished in 1926 and its functions were transferred to the Directorate of Fazenda. Council of Fazenda was replaced by the Administrative Tribunal under the Charter of 1926 (4th October).

NATURE OF TAXES

Custom duty was prevalent in the district even before 1054.[1]. This duty consisted of a 6 per cent tax on all exports except on the export of pearls, diamonds, gold, silver and horses.[2]

Crown lands including those lands which were abandoned by the Muslims after the Portuguese conquest of Goa, were distributed amongst those Portuguese who married Indian women (casados), for the maintenance of themselves and their descendants. These were given in *sesmaria* levied in order to be cultivated. The *sesmaria* (a system of land tenure) rules and enactments from Portugal were to be carried out in Goa. Persons renting such lands were to pay only 'Dizimos' (10 per cent) due to the Church and no other tax. This was in 1518.

Another ancient system of village administration was confirmed by the Code of 1526. The villages were thus required to pay to the Government, tax which was called *Khushivrata* or voluntarily accepted tax. Later on in 1533, Horse tax (Ghodevrata) was added to this. The Village Officers paid *Namas* or *Namoxins* (a system of land tenure). From 1539, 'Foro' was levied instead of these taxes.

From 1541 to 1542, a contract with the tax collectors was given for 25,000 *zerafi*. The same was increased to 1,89,490 *zerafi* by 1594. From 1568 and upto 1570 the rate of tax was raised to 7 per cent and at the time of war between Portugal and Holland, it was raised to 9 per cent. However, it was brought down to 5 per cent in 1724. For the collection of taxes, head offices were set up at Panaji, Divar, Banastari, Agasaim, Nuvem, Sinqueri and Chorao.

In 1702, 'Meios dizimos' was levied on all inhabitants. This was withdrawn two years later and 'Meios Foros' or half of the 'Foros'

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[1] O.P., No. 22, (New Series), p. 387.
[2] Gune V. T., *op. cit.*, pp. 74-75.

was levied on village communities. They were further made to pay additional 'Dizimos' from 1745. In 1705, a tax at the rate of Rs. 8,00 per head was introduced to the top knot of Hindus. This tax was first collected in 1706 and the annual return brought in Rs. 8,000·00. In 1777, 'Meio por cento' or half per cent tax was newly established on the income of lands from the Old Conquests. Though originally introduced for a period of 10 years, it was collected throughout. The number of export duty officers was brought down from 10 to 5 in 1840. The following year a new office was set up at Dodomarg. Hindus in the territory were banned from undergoing various sacraments in 1857. It made the Hindus to go out of the territory to perform their marriage and such other sacraments. A tax was levied on all persons leaving the territory for such purposes. The total revenue of the State in 1873-74 was £112,473-18-10, and the expenditure £110,059-15-2. The chief sources of revenue were tithes on rice, coconuts and salt; customs and postal dues; seal and stamp duties; tobacco licenses; licenses on liquor shops, etc. From 1883, 'Dizimo Predial' was levied on the Net Income of the Lands and 'foro' was discontinued. 'Alfandegagem' or Custom duty was the main source of the Portuguese income.

Because of a contract with the English Government in 1878, tax was not collected upto 1892 when it became protective of excise duty with rates varying from 14 to 20 per cent. By 1930, income realised by way of excise duty was Rs. 19,00,000·00.

'Imposto de Defesa' was instituted in 1942 by the Decree No. 30117, of 8th December, 1939. This tax was on all income, excepting from land and interest, exceeding 40 contos. The following are the rates of this tax on varying amounts of income :

41 to 80 contos[1]	...	Rs. 1·00 per cent
81 to 500 contos	...	Rs. 2·00 per cent
Over 500 contos	...	Rs. 3·00 per cent

Concessions were granted to those persons having 3 minor children and an income below 100 contos per month. Concessions were not granted to those whose income exceeded 100 contos. In 1953, amount realised by way of tax was Rs. 67,000·00.

In 1947, 'Contribuição Industrial' was introduced. This was paid by pleaders, doctors, merchants and persons engaged in such other occupations. All imports were taxed at the rate of 12 annas per cent. For those engaged in private occupations, the following were the rates of taxes :

[1] Forty contos were equivalent to Rs. 171, annas 13 and paise 3.

Upto Rs. 999·00	...	... no tax
From Rs. 1,000·00 to Rs. 1,500·00		... Rs. 10·00
Above Rs. 1,500·00	...	... Rs. 1·00 extra for every Rs. 100·00.

In 1950, amount realised by way of this tax was Rs. 10,81,758·00.

A 12 per cent tax on the net agricultural income was introduced in 1950, to be paid to the State. This amounted to Rs. 8,42,925·00 in the same year.

Indirect taxes amounted to a total of Rs. 59,45,754·00. Import duty brought in Rs. 48,23,482·00, export duty brought in Rs. 45,822·00 and Stamp and other duties brought in Rs. 10,76,450·00.

The revenue sources and expenditure items [1] prevailing during the Portuguese regime in the year 1961, were numerous.

The revenue sources comprised general direct taxes ; indirect taxes ; industries under special pattern of taxation ; taxes on income of various services ; private ownership, enterprises and industries of the Government, sharing of incomes ; yield on the principal amount, shares and dues of banks and companies ; reimbursement and refunds, deposit of incomes and extraordinary revenue.

The items of expenditure comprised outstanding amount in respect of the province ; expenditure relating to the Government of the province and National representation, civilian retirement pensions, teachers' pensions, financial burdens and military pensions ; general administration and supervision ; services of Revenue and Accounts (Fazenda) ; services of justice ; services of agriculture ; national defence-army , services of navy, general burdens, passed financial commitments and extraordinary expenditure.

The revenue expected for the year 1961 amounted to Rs. 6,71,53,227·00 equivalent to ' escudos approximately, (40,29,19,364$ 50) while the expenditure estimated for the same year also amounted to Rs. 6,71,53,227·00 (40,29,19,364$ 50).

The functions of the Government during the Portuguese regime were restricted to the collection of taxes and protection of human life and property. With the change in the attitude of the Government since Liberation, welfare activities became a major function of the Government. However, the importance of the revenue collections to the Government can never be insignificant and have added weightage in view of the necessity of collecting funds required for different developmental activities. In what follows in this chapter are described in brief the revenue earning and managing departments of the Government.

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[1] Govt. Gazette of Goa, Daman and Diu (Estado da India), 1960, Series I, Number 52.

DIRECTORATE OF LAND SURVEY

The composition of the Directorate of Land Survey had undergone many changes since its inception. Established under the Provincial Order dated the 4th August 1898, it was made a section of the Public Works Department under decree dated the 29th August 1906, and was treated so till 28th October 1911 when it was again made an independent department of Land Survey and Mines. It was redesignated as Directorate of Land Survey on December 24, 1917. It was subsequently amalgamated with the Public Works Department under common caption as the Directorate of Public Works and Transport and Land Survey. The work of Land Survey was transferred to the Directorate of Economic Services which came to be known as the Directorate of Industries, Mines and Land Survey, from 20th July, 1957. It continued to be so till 17th July, 1965, when the work of land survey was transferred to the Collectorate.

The main activities of the Department in the erstwhile regime were as follows :

(*i*) Assignment of Government lands on permanent and temporary basis.

(*ii*) Cadastral Survey.

(*iii*) Inventory of Comunidades and Corporation lands and its maintenance.

(*iv*) Delimitation of Frontiers.

(*v*) Geodetic and Topographical survey.

(*vi*) Preparation of topo-agricultural map.

(*vii*) Agricultural Statistics.

Although cadastral survey work of Goa was undertaken as far back as in 1904 by the erstwhile regime, it was completed only in 3 talukas viz. Tiswadi, Ponda and Bicholim and partly in talukas of Bardez, Pernem, Sanguem, Satari and Salcete. Besides, the Government lands leased out on permanent/temporary basis and almost all the Comunidade land were also surveyed. This survey being on a small scale (viz. 1 : 5,000 and 1 : 4,000) and not maintained day to day had become out-dated.

After the Liberation it was decided to undertake the cadastral survey work of Goa Territory, *de novo*, particularly due to enactment of tenancy legislation whereby the tenancy rights were, for the first time, recognized. Besides up-to-date cadastral maps were found essential to implement various land reforms and carry out other various developmental activities.

The cadastral survey scheme was therefore included as a Plan Scheme and work on it was actually commenced in November 1965

with 16 surveyors and 5 Head Surveyors. At present there are about 300 surveyors working on this scheme.

By now, all the villages in the district except St. George Island lying off the Goa coast have been covered by the Theodolite Survey. The work in 410 villages out of 429 villages of the entire Goa territory was completed by Detailed Survey upto the end of March 1976, the Theodolite Survey in respect of one village and Detailed Survey of 19 villages left over are in progress.

Besides the cadastral survey scheme of Goa, the department is entrusted with implementing other subsidiary schemes, such as preparation of Record of Rights and City Survey and Land Classification.

Record of Rights

In July 1969, it was decided to commence the work of writing Record of Rights in the villages cadastrally surveyed.

Out of 429 villages, altogether 172 villages covering talukas of Pernem, Bardez, Bicholim, Ponda, Salcete, Mormugao and Quepem of Goa district were completed by the end of March 1976 and the work in 111 villages is in progress.

City of Survey

The City Survey work in four municipal towns namely Panaji, Margao, Mapusa and Vasco-da-Gama was completed and Enquiry work in three towns of Panaji, Margao and Vasco-da-Gama is in progress So far 7,127 individual holdings were examined and possession thereof confirmed as on March 31, 1976.

Land Classification

The scheme of land classification was commenced from November 1971 with a staff of 10 Classers and 5 Supervisors. Out of 429 villages, 115 villages covering the talukas of Pernem, Bardez, Bicholim (Part) and Ponda (Part) of the Goa district was completed by the end of March 1976.

The revenue collected and credited to Government account by way of sale of maps, plans, blue print copies, certified copies of survey records and search fees of survey records for the period upto December 1974 was to the tune of Rs. 33,420·57.

LAND REFORMS

After enacting the Goa, Daman and Diu Agricultural Tenancy Act, 1964 and the Land Revenue Code 1968, (Act No. 9 of 1969), Government appointed a Land Reforms Committee in 1969 to study all the aspects of Land Reforms. On the basis of the report submitted by the Committee in 1970, the Goa, Daman and Diu Land Reforms Bill,

1971 was drafted. In the meanwhile, it was decided by the Government that instead of rushing to hasty legislation in the field of land reforms, another amendment should be effected to the existing Tenancy Act 1964, covering some of the important aspects of the land reforms, in accordance with the guidelines evolved by the Government of India. Accordingly, the Goa, Daman and Diu Agricultural Tenancy (Fifth Amendment) Act, 1976 (Act No. 17 of 1976) was enacted. Under this Act all the rights, titles and interests of the landlords regarding the land held by the tenants are vested in them against the payment of the purchase price as prescribed in the Act fixed on the basis of fair rent being collected by the landlords. The Act also gives protection to tenants of coconut, arecanut and cashewnut gardens.

The Goa, Daman and Diu (Protection from Eviction of Mundcars, Agricultural Labourers and Village Artisans) Act, 1971, was enacted as an interim measure. Thereafter, a comprehensive Legislation viz. the Goa, Daman and Diu (Protection from Eviction) Act, 1975 (Act No. 1 of 1976) was enacted. This Act provides better protection to the Mundcars against eviction from their dwelling houses and also grants them the right to purchase the houses with the site appurtenant where such houses have been built. Similarly, the Goa, Daman and Diu Protection of Rights of Tenants (Cashewnuts and Arecanuts Gardens) Act 1971, was then enacted to provide protection from eviction to the tenant of cashewnuts and arecanuts gardens which now stands repealed by virtue of Section 6 of the Goa, Daman and Diu Agricultural Tenancy (Fifth Amendment) Act, 1976, as such garden have been brought under the purview of the said Act.

A comprehensive Bill concerning the problem of indebtedness among the weaker sections of the rural community called the Goa, Daman and Diu Agricultural Debt Relief Bill, 1976 has been drafted and is at present under the consideration of the Government in consultation with the Government of India. In the meanwhile, the Goa, Daman and Diu Agricultural Indebtedness (Temporary Relief) Act, 1976 has been enforced in order to provide temporary relief from indebtedness to agricultural labourers, small farmers and rural artisans in the territory.

REVENUE AND TAXES DEPARTMENT

The Revenue and Taxes Department was created in December 1963 and it came to be established as a result of the bifurcation of the Fazenda during the Portuguese rule. The department is headed by the Commissioner of Revenue and Taxes. The department has eleven subordinate offices designated as Taluka Revenue offices with headquaters at Panaji, Margao, Mapusa, Vasco-da-Gama, Bicholim, Ponda, Sanguem, Quepem, Pernem, Valpoi, and Lanacona. Respective Mamlatdars work as head of these offices. The Commissioner of Revenue and

Taxes is assisted by two Superintendents, eight Head Clerks, three Inspectors and other necessary ministerial and menial staff.

In the initial stages, the department was divided into five sections. At present the main functions of the department of Revenue and Taxes are as under :

(*a*) Assessment levy and collection of

(*i*) Land tax.

(*ii*) Complementary tax.

(*b*) Forcible recovery of arrears of land tax and quit rent, only relating to proceedings which have been initiated before the enforcement of Land Revenue Code, i.e. before March 1, 1971.

(*c*) Forcible recovery of pre-liberation abolished taxes.

(*d*) Recovery of T. B. Association funds.

The department of Revenue and Taxes was also entrusted with recovery of arrears of loans granted by Government departments, arrears of Co-operative Societies of Income Tax and arrears of other States. However, with the enforcement of Land Revenue Code 1968 with effect from March 3, 1971, this department ceased to be the competent authority for the said recovery.

The Commissioner of Revenue and Taxes also discharged the functions regarding procurement and supply of stamp paper and matters relating with Indian Stamps Act, 1899, and Court Fees Act, 1870.

Amounts of receipts and arrears collected by this department during the year 1973-74 are as follows :

Head of Account	Amount of Receipts
029—Land Revenue (Ordinary Revenue)	Rs. 11,93,321·00
045—Other taxes and Duties (Other items)	Rs. 2,27,887·00
030—Stamps	Rs. 28,22,656·00

The expenditure incurred on tax collection etc. during the year 1973-74 amounted to Rs. 93,303·00.

REGISTRATION DEPARTMENT

Historical Background

The office of the Registers and Notary Services was established by the implementation of the Decree No. 43,089, dated the 6th July 1960 and the office was named as the Criminal Records Office (Arquivo Provincial do Registo Criminale Political). The criminal records spread over all the judicial divisions (*comarcas*) of the territory were centralised in the Criminal Records Office. The Criminal Records Office was renamed as the Office of the Registers and Notary Services

(Repartição dos Registos de Notariado) and was raised to be a controlling office of the services of Land Registration, Notaries, and Civil Registration along with the Criminal Records.

On November 1, 1965, the extension of the Indian Registration Act, 1908, was enforced in the Union Territory and this office organized the procedure for registration in accordance with the Indian Registration Act, 1908. The head of the Registers and Notary Services was appointed District Registrar-*cum*-Head of the Registers and Notary Services.

Functions

The Registration department was established in the district of Goa in the month of May 1969. The department with sixteen subordinate offices under its control is entrusted with the Registration Services under the Land Registration Code[1], 1961 the Civil Registration Code, 1912 (Registration of Births, Deaths and Marriages), the Indian Registration Act, 1908; the Indian Partnership Act, 1932, and the Registration of Societies Act, 1860. The Registration of Births and Deaths Act, 1969 and the Registration under the Goa, Daman and Diu Chit Funds Act, 1973 have also been extended to the Union Territory of Goa, Daman and Diu Besides the above mentioned activities, the Registration Department also undertakes the services of Notary Public in ex-officio capacity.

The following table gives the information about the work done by the department during the year 1968.

The number of deeds, wills, certified copies and attestation of signatures, registered at the Civil Registration Offices in 1968 are as under :—

TABLE No. 1 WORKING OF CIVIL REGISTRATION DEPARTMENT

Taluka	Deeds	Wills	Certified copies	Attestation of signature
1	2	3	4	5
Tiswadi ...	54	36	610	2.462
Salcete ...	148	80	795	2,360
Bardez ..	109	120	539	2,269
Mormugao ...	4	5	38	447
Ponda ...	8	1	65	400
Bicholim ...	9	8	123	142
Quepem ...	12	7	210	253
Total ...	344	257	2,380	8,333

[1] Decree No. 42565, dated 8th October, 1959, published in the Official Gazette, dated 28th November, 1961, series I, No. 47.

The presentations registered at Land Registration Offices during 1969 are as under :—

WORKING OF LAND REGISTRATION OFFICES 1969

Land Registration Office			Presentation	
			Predial	Commercial
Tiswadi	...	...	764	82
Salcete	...	...	1,080	10
Bardez	...	...	588	5
Bicholim	...	...	444	1
Quepem	...	...	492	28
		Total ...	3,368	126

The deeds and folios received for registration at the Sub-Registrar's Offices during 1968 are as under :—

DEEDS AND FOLIOS AT SUB-REGISTRAR'S OFFICE 1968

Sub-Registrar Offices		Deeds	Folios
Tiswadi	...	759	11,074
Salcete	...	1,536	16,003
Bardez	...	849	8,773
Mormugao	...	46	592
Ponda	...	253	2,902
Bicholim	...	363	4,152
Quepem	...	335	3,333
	Total ...	4,141	46,829

Receipts and expenditures

The total receipts of the Registration department during both 1968-69 and 1969-70 were Rs. 4,25,317·00 annually. The expenditure of the department during the year 1968-69 and 1969-70 was Rs. 5,76,395·58 and Rs. 5,66,970·00 respectively.

DIRECTORATE OF TRANSPORT

Prior to the Liberation of the territory from the Portuguese, Goa was almost isolated in respect of communications between the territory and the other parts of the country. Since Liberation, inter-state communications have also improved to a considerable extent. Road transport is one of the main systems of Transport among the masses in this Union Territory. There are in all 4 types of transport existing

in this district which serve for both internal and external transport, *viz.* transport by rail, by sea, by road and by air. There are in all 28,914 motor vehicles of various types and descriptions registered in Goa as on 31st March 1976.

Prior to January 1, 1965, the Motor Vehicles Department was functioning under Portuguese Motor Vehicle Acts and Rules. The Motor Vehicle Technical Committee consisted of one President and four other members. In addition to the Motor Vehicle Technical Committee there was a Motor Vehicle Supreme Committee which comprised one Chairman and six members. Under the Portuguese Act, no tax was imposed on motor vehicles except that the transport vehicles used for public hire had to pay a nominal amount by way of tax every year.

With effect from January 1, 1965, the Motor Vehicle Supreme Committee and the Motor Vehicle Technical Committee were abolished and a post of Director of Transport was created as the head of Motor Vehicles Department for the whole of the Union Territory of Goa, Daman and Diu. The staff of the above two Committees was merged in the newly formed department and was further augmented by the appointment of one Assistant Director of Transport, five Motor Vehicle Inspectors and four Assistant Motor Vehicle Inspectors to carry out the executive duties under the Motor Vehicles Act, 1939. The ministerial staff was also augmented.

The Indian Motor Vehicle Act, 1939, the Goa, Daman and Diu Motor Vehicle Rules, 1965, the Goa, Daman and Diu Motor Vehicle Taxation Act, 1965 and the Rules framed thereunder were introduced in the Union Territory of Goa, Daman and Diu with effect from January 1, 1965, replacing the erstwhile Portuguese Motor Vehicles Act, Diploma, Decrees, etc.

As has already been stated earlier, there was no scope for inter-state communications during the Portuguese regime between Goa and the rest of the country. The territory has its borders touching the three states of Maharashtra, Karnataka and Gujarat. The Government of Goa, Daman and Diu have entered into reciprocal transport agreements with these adjoining States on the basis of single point taxation.

The terms of the reciprocal agreement provide that the Home State Transport Authority will recommend a fixed number of vehicles for the grant of countersignatures by the reciprocating States on the permits relating to their States. The reciprocating State may then grant the countersignature on such permits as a matter of course.

The following statement gives the number of vehicles for grant of countersignatures by each of the reciprocating states, during the year 1974-75.

Name of the State	Number of goods, vehicles and tankers	
	Public Carrier	Private Carrier
Maharashtra	374	15
Karnataka	300	23
Gujarat	10	—

During the same period, the permits relating to the goods vehicles and tankers of the reciprocating States held valid countersigned permits for Goa are as follows :—

Name of the State	Number of goods vehicles and tankers	
	Public Carrier	Private Carrier
Maharashtra	395	15
Karnataka	300	24
Gujarat	9	—

Compulsory Insurance

The provisions of Chapter 8 of the Motor Vehicles Act, 1939 and the rules thereunder were enforced in respect of all motor vehicles and the particulars of insurance were noted in the records. Insurance certificates are also verified during surprise checks carried out by the officers of Motor Vehicle Department and prosecution launched against the defaulters.

Taxation

Under the Motor Vehicle Taxation Act and Rules, 1965, tax tokens are issued to vehicles in respect of each tax paid and exempted tax tokens are also issued to those who are granted such exemptions by the licensing officers in their jurisdiction.

A review is carried out from time to time in order to check the cases of evasion of tax and demand notices are issued requesting the owners to clear off the dues within a stipulated period.

The owners of vehicles intending to keep in non-use are required to send an advance intimation before the commencement of the quarter in respect of which exemption is claimed and giving the complete address of the place where the vehicle will be garaged. He is also required to deposit the registration certificate with the Licensing Officer.

Tourist Taxis and Omnibuses

In order to provide an incentive for the development of tourism it has been decided to provide tourist vehicles in this district. This territory has already adopted model rules recommended by the Government of India in connection with the grant of endorsement on permits for tourist omnibuses and taxi-cabs. The State Transport Authority has already issued tourist permits for 41 taxi-cabs in accordance with provisions of the Goa, Daman and Diu Tourisf Motor Vehicles Rules, 1967. Four tourist omnibuses are also plying the district to cater to the needs of the tourists.

Control of Transport Vehicles

The State Transport Authority maintains effective control over transport vehicles in accordance with the provisions of Chapter 4 of the Motor Vehicles Act 1939, and also under the directives issued by the Government. The State Transport Authority meets once in a month to consider various subjects relating to road transport in Goa, Daman and Diu. Bus transport is not nationalised in this district.

(*a*) Stage Carriage : Permits for stage carriage are issued and renewed for a period of 3 years.

(*b*) Public Carriers : The applications for public carrier permit in the prescribed form (P.PU.C.A.), are considered and disposed by the Director of Transport Authority. These permits are for public goods vehicles and public tankers and they are issued for districtwise area. Permits are issued and renewed liberally in the district for a period of five years on payment of prescribed fees.

(*c*) Private Carriers : Private carriers permits are granted on the receipt of application in prescribed form (P.Pr.C.A.), to such of the applicants who maintain their vehicles for transporting their own goods in connection with their own trade or business, after ascertaining the *bona-fides* of the applicant. Such permits are issued for a period of five years on payment of the respective fees and the nature of goods allowed to be carried in such vehicles is specifiefid in each permit. Such permits are generally held by mine-owners, factories, mills, building constructors, industrial bodies, etc. These permits are issued for districtwise area.

The Chief Secretary to the Government of Goa, Daman and Diu, is the appellate authority for appeals against the decisions of the State Transport Authority and the Director of Transport. During the year 1974-75, three writ petitions were filed by the parties aggrieved against the decisions of the Appellate Authority in the Judicial Commissioner's

Court, Panaji, and all the three petitions were decided in favour of Government.

Work done by the Department

During the period 1974-75, 443 motor driving licences and 150 conductors' licences were issued. Similarly, 136 authorisations to drive public service vehicles were granted.

Learners licences are also issued after the verification of the candidates' fitness and passing the oral test laid down in the Ninth Schedule and Traffic Regulations contained in the Tenth Schedule of the Motor Vehicles Act, 1939.

During the year 1974-75, 5,458 applications for learning licences were granted.

During the year 1974-75, certificates of registration in respect of 46 motor vehicles were suspended under section 33(*1*) (*b*) of the Motor Vehicles Act, 1939.

Accounts and Finance

The income of the department during the year 1973-74 was Rs. 44,88,568·00. The Budget Estimates for the year 1974-75 is Rs. 61,66,000·00. The implementation of the Goa, Daman and Diu Motor Vehicles Tax Act, 1974 with effect from October 1, 1974, superseding the earlier Goa, Daman and Diu Motor Vehicles Taxation Act, 1965, is expected to bring a net additional income of Rs. 35,00,000·00 to Rs. 40,00,000·00 per annum. A new Act, called the Goa, Daman and Diu Motor Vehicles (Taxation on Passengers and Goods) Act, 1974 was also passed by the Legislature on the lines prevailing in the neighbouring States. Framing of Rules under the Act have been finalised alongwith the recruitment of some additional staff and training of few hands. The Act is enforced from March 1,1975. It is expected that in a full year this will bring an additional net income of Rs. 25,00,000·00.

EXCISE DEPARTMENT

Establishment

The Excise Department was initially formed and came into being on October 1, 1963. The Excise department was established to deal with problems relating to the production and movement of liquor into and out of the Union Territory and matters relating thereto and was placed under the administrative control of the then Director of Fazenda who prior to the said date was in charge of the control of production, licensing and taxing of liquor. It became a full-fledged department with the coming into force of the Excise Duty Act, 1964, and the Rules made thereunder as from December 1, 1964.

Functions

The Excise department has been entrusted with the implementation of the Goa, Daman and Diu Excise Duty Act, 1964 and the Goa, Daman and Diu Excise Duty Rules, 1964, both enforced in the Territory with effect from December 1, 1964, and the Medical and Toilet Preparations (Excise Duties) Act, 1955, and the Medical and Toilet Preparations (Excise Duties) Rules, 1956 both enforced in the territory with effect from December 1, 1965. The Government have also entrusted to this department the control of imported foreign liquors.

The following statement gives the number of licences issued to various distilleries and other untis during the year 1969-70 :

Name of the firm	Number of licences issued
Manufacture of liquor	13
Stills to manufacture country liquor (cashew, coconut and sugercane).	5,250
Blending of country liquor	4
Bottling of country liquor/I.M.F.L	31
Manufacture of medicinal/toilet preparations	9
Wholesale of country liquor	54
Wholesale of I.M.F.L./imported liquor	68
Wholesale of denatured spirit/rectified spirit	19
Retail sale of I.M.F.L.	423
Retail sale of country liquor	1,684
Retail sale of denatured spirit/rectified spirit	..
Occasional licences issued for retail sale of liquor ..	118
Toddy shops	..
Bonded warehouses for storing unduty paid liquor ..	25
Retail/wholesale of spirituous preparations such as French Polish, thinner, varnish.	26
Possession and use of denatured spirit for manufacturing varnishes, dyes, colours and the like.	2
No. of trees (coconut, cajuri and tad) tapped	77,581
Permits issued for import of I.M.F.L./denatured spirit/ rectified sprirt from the rest of India into this territory.	623
No objection certificates issued for taking liquor to the wet areas outside Goa for personal consumption and for transport of imported foreign liquor to the rest of India.	4,777
Permits issued for import of I.M.F.L. form this territory to the rest of India.	121
Number of cases detected under the Excise Duty Act, 1964, and the rules made thereunder.	173

The following statement indicates the number of licences issued for stills for manufacture of liquors :—

Taluka	For cashew liquor from cashew juice		For country liquor from toddy	
	1973-74	1974-65	1973-74	1974-75
1	2	3	4	5
Tiswadi ...	369	264	569	279
Salcete ...	43	33	346	506
Bardez ...	225	180	585	322
Mormugao ...	44	50	348	353
Ponda ...	186	215	319	315
Bicholim ...	6	228	59	72
Pernem	1,167	474	1,037	508
Quepem ...	64	91	223	227
Sanguem ...	168	379	195	303
Canacona ...	24	98	312	385
Satari ...	206	266	7	10
Total	2,502	2,278	4,000	3,280

Excise Receipts

Since inception, the Excise Department is making all-out efforts to tap revenue from all possible sources. The following statement gives the figures of excise revenue receipts collected in the territory during the year 1973-74 and 1974-75.

(Rupees in lakhs)

Item	Year	
	1973-74	1974-75
1	2	3
Country liquor	19·94	53·11
Malt liquor	24·09	22·98
Wines and spirits, foreign liquor other than beer, etc.	60·20	63·51
Receipts from commercial spirits, including denatured and medical wines.	0·03	0·41
Duty on medical and toilet preparations containing alcohol.	3·22	2 97
Receipts from distilleries	25·52	5·64
Fines and confiscations	1·13	1·65
Recovery over-payment	....	0·34
Tree Tax	5·64	(a)
Other items (b)	9·50	1·18
Total ..	149·27	151·79

(a) Tree tax is included in country liquor.

(b) Licence fee and contribution towards establishment is included in other items.

SALES TAX DEPARTMENT

There was no tax on sale of goods in this territory under the Portuguese system of taxation. The Central Sales Tax Act, 1956, was in force in this Territory with effect from 23rd January 1963 only to the extent of providing the dealers the benefit of purchase of goods in the course of inter-state trade or commerce at concessional rate of tax and its implementation was in charge of the Revenue Division of the erstwhile Directorate of Fazenda and Accounts. The Sales Tax was first introduced in the territory with effect from November 1, 1964.

Incidence of Tax

Under the Goa, Daman and Diu Sales Tax Act, 1964, the taxable quantum for an importer or manufacturer is Rs. 10,000·00 regardless of the value of goods imported, manufactured or produced whereas the same in relation to other dealers is Rs. 30,000·00.

Also by virtue of Section 6 of the Act, the dealers registered under the Central Sales Tax Act, 1956, are liable to pay tax under the Goa, Daman and Diu Sales Tax Act, 1964.

Rate of Tax

Under the Goa, Daman and Diu Sales Tax Act, 1964, there are only three rates of tax :—

(*i*) in respect of the goods specified in the first Schedule—11 per cent the goods or classes of goods specified in this Schedule are mostly luxury goods. There are 33 classes of goods included in this Schedule.

(*ii*) in respect of the goods specified in the Second Schedule the rate of tax is NIL—the goods or classes of goods specified in this Schedule are mostly the essential commodities and raw material which figure substantially in the cost of living of the poorer sections and hence they are exempted from levy of sales tax. There are 68 classes of goods in this Schedule.

(*iii*) in respect of certain goods including the declared goods--3 per cent. The number of such classes of goods is 11.

(*iv*) in respect of the goods which are not covered by (*i*), (*ii*) or (*iii*) above, the rate of tax is 6 per cent.

The Government is however empowered to direct that the tax in respect of any class of goods be levied at lower rate if it is in the interest of the general public.

Point at which sales are taxed

The system of levy adopted under the Goa, Daman and Diu Sales Tax Act, 1964, is a single point levy at the last point of sale. However, the Government is empowered to levy the tax at the first or any other point of sale in respect of any classes of goods instead of the last point

of sale, and the Government has already availed itself of this power and specified by Notification many classes of goods which are taxable at the first point of sale. Thus at present the system of sales tax levy is single point levy either at the first point of sale or the last point of sale i.e. at the point where the goods enter the stream of sales or at the point of exit therefrom.

Functions

The functions of the Sales Tax Department are mainly as follows :—

(*a*) Implementation and Enforcement of the Sales Tax Laws i.e. Goa, Daman and Diu Sales Tax Act, 1964 and Central Sales Tax Act 1956 and the Rules made thereunder.

(*b*) Survey, inspections and investigations to detect tax-evaders and tax-dodgers and also to rope in the dealers who have escaped registration.

(*c*) Watching of quarterly returns and regular payments by registered dealers.

(*d*) Assessment of tax payable by the dealers.

(*e*) Recovery of tax due as a result of assessment.

(*f*) Appeal.

(*g*) Second Appeal to Tribunal.

(*h*) Revision.

(*i*) Compounding of offences.

(*j*) Prosecution of offenders.

Work done by the Department

The Sales Tax Department is a taxation Department. It has helped the Goa, Daman and Diu administration towards the increase in its revenue receipt by way of sales tax collection. The revenue receipts of sales tax and the number of registered dealers under the Goa, Daman and Diu Sales Tax Act, 1964 and under the Central Sales Tax Act 1956, continues to show an increasing trend.

The following statement shows the comparative position of the number of registered dealers and total tax collected in the district during the year 1973-74 and 1974-75.

Year	No. of Registered dealers		Total tax collected	
	Under Goa, Daman and Diu Sales Tax Act, 1964	Under Central Sales Tax Act, 1956	Under Goa Daman and Diu Sales Tax Act, 1964	Under Central Sales Tax Act 1956
			Rs.	Rs.
1973–74 ..	3,496	2,164	3,25,93,149.00	24,00,971.00
1974–75 ..	3,881	2,407	4,78,53,715.00	33,17,559.00

The Union Territory of Goa, Daman and Diu industrially was a backward area. In order to give incentive to the new entrepreneurs in this territory and also to attract the industrialists of other States to extend the sphere of their activity in this Territory, goods manufactured by the Small Scale Industries from the date of their registration in the Directorate of Industries and Mines are exempted from Sales Tax for a period of five years. It is expected that this step will encourage the starting of new Small Scale Industries in this district and consequently will help considerably to reduce the unemployment.

OFFICE OF THE COMMISSIONER OF ENTERTAINMENT TAX

The office of the Commissioner of Entertainment Tax is charged with the implementation of the Goa, Daman and Diu Entertainment Tax Act, 1964, and the Rules framed thereunder. The Office has no subordinate offices as such. Consequently the work of inspection is entrusted to the Revenue Inspectors attached to the 11 Taluka Revenue Offices and who are actually under the control of the Heads of Taluka Revenue Offices (Taluka Mamlatdars).

Entertainment Tax is levied on every taxable ticket issued in respect of an entertainment to which persons are admitted on payment. The tax is calculated on the price of admission at the rates specified in Section 3 of the Goa, Daman and Diu Entertainment Tax Act, 1964.

The comparative figures of entertainment tax receipts for the years 1972-73 and 1973-74 are shown below :--

Year			Entertainment Tax
			Rs.
1972-73	...	...	12,87,907·00
1973-74	..	...	14,71,000·00

The increase in revenue (entertainment tax proper) in 1973-74 as compared with that accrued in 1972-73 works out at 14 20 per cent. This increase is attributed to the increase in the number of audiences in cinema theatres and other places of entertainment as also due to an increase in the number of entertainment programmes.

CUSTOMS DEPARTMENT

The organisation of the Customs Department set up in 1917 continued till 1961 with modifications introduced in it from time to time. After Liberation, the Customs Department was taken over by the Central Government.

The following statement shows the Customs revenue earned from Imports and Exports collected in the territory during the year 1971-72 and 1972-73 :

(Rs. in lakhs)

Articles	1971-72	1972-73
I. IMPORTS		
(a) Revenue Duties		
1. Spirits and liquors	3.79	2.05
2. Spices	—	0.01
3. Industrial fuel oil	—	0.99
4. Chemical drugs and medicines	12.57	1.94
5. Motor cars, motorcycles, scooters, omnibus, chassis, vans, lorries and parts thereof. ..	0.65	0.96
6. Wireless reception	—	0.01
7. Machinery	310.00	12·38
8. Iron and steel	2.69	15.30
9. Motor vehicle parts	2.53	0.96
10. Pneumatic rubber tyres and tubes ..	0.39	0.01
11. Wood plup, paper and stationery ..	0.06	0.12
12. Fertilizers	11.07	—
13. All other articles	14.54	19.12
Total—(a) Revenue Duties	358.29	53.85
(b) Regulatory Duties		
1. Spirits and liquors	—	0.07
2. Motor cars, motorcycles, scooters, omnibus, chassis, vans, lorries and parts thereof.	—	0.08
3. Machinery	3.13	1.27
4. Industrial fuel oil	0.15	—
5. Chemical drugs and medicines	—	0.16
6. Iron and steel	—	1.28
7. Motor vehicle parts	—	0.09
8. Wood pulp, paper and stationery ..	—	0.01
9. Fertilizers	0.86	3.82
10. All other articles	1.16	1.07
Total—(b) Regulatory Duties	5.30	7.85

(Rs. in lakhs)

Articles	1971-72	1972-73
(c) Auxiliary Duties		
1. Motor cars, motorcycles, scooters, omnibus, chassis, vans, lorries and parts thereof.	—	0.03
2. Machinery	—	0.01
3. Fertilizers	—	3.69
4. All other articles	—	0.04
Total—(*c*) Auxiliary Duties ..	—	3.77
(d) Additional Duties		
1. Spirits and liquors	0.10	0.62
2. High speed diesel	—	0.01
3. Industrial fuel oil	5.65	27.79
4. Motor cars, motorcycles, scooters, omnibus, chassis, vans, lorries and parts thereof	—	0.13
5. Wireless reception	—	0.01
6. Machinery	—	0.12
7. Electrical lighting bulbs	—	0.12
8. Iron and steel	—	2.66
9. Motor vechicle parts	—	0.07
10. Pneumatic rubber tyres and tubes ..	—	0.01
11. Fertilizers	10.45	36.40
12. Batching, lubricating and other mineral oils	—	0.17
13. All other articles	4.53	1.96
Total—(*d*) Additional Duties ..	20.73	70.08
Total $(a + b + c + d)$	384.32	135.55

(Rs. in lakhs)

Articles	1971-72	1972-73
II EXPORTS		
(a) Export Duties		
1. Manganese Ore	70.31	63.85
2. Deoiled groundnut meal	41.87	51.90
3. Dumpy iron ore	237.49	255.61
4. Iron ore fines (including blue dust) ..	221.99	261.55
Total—(*a*) Export Duties ..	571.66	632.91
(*b*) Total Cess on Exports	....	0.02
Total—(*b*) Cess on Exports ..	....	0.02
(*c*) Miscellaneous	10.58	11.83
Total—(*c*) Miscellaneous ..	10.58	11.83
Total (*a* + *b* + *c*) ..	582.24	644.76
Total Gross Customs Revenue	966.54	780.32
Total Refunds and Drawbacks	13.19	9.62
Net Customs Revenue	953.35	770.70

The following statement indicates commodity wise Central Excise duties collected in the district during the year 1971-72 and 1972-73.

(Rs. in lakhs)

	Commodity	1971-72	1972-73
1.	Refined diesel oil	771.39	917.05
2.	Light diesel oil	26.18	....
3.	Motor spirit	462.97	531.11
4.	Kerosene (Superior)	225.35	268.40
5.	Furnace oil	69.77	61.15
6.	Tobacco unmanufactured	1.44	1.39
7.	Cosmetics	0.82	1.18
8.	Soap	0.45	0.57
9.	Patent and proprietary medicines ..	4.13	5.18
10.	Prepared and preserved food	2.33	3.42
11.	Sodium Silicate	0.54	0.49
12.	Aerated water	6.75	12.79
13.	Paints and varnishes	0.56	0.67
14.	Cotton yarn	3.57	3.12
15.	Miscellaneous	4.63	48.86
	Gross Total ..	1,580.88	1,855.38
	Refund ..	0.17	0.63
	Net Total ..	1,580.71	1,854.75

* * *

CHAPTER 12—LAW, ORDER AND JUSTICE

Protection of human life and property, administration of justice and maintenance of law and order are the principal functions every Government has to perform. These functions are performed by the Police Department, the Prisons Department and the Judicial Department. This chapter gives in brief, the functioning of these departments which are concerned with maintenance of law and order and administration of justice.

POLICE DEPARTMENT

Historical Background

During the early days of their regime, the Portuguese did not have a separate Police unit under their administrative set up of Goa, Daman and Diu. The functions of the Police were entrusted to the Army. However, a unit, to look after the Police duties exclusively, was created within the Military Services in 1924 and was named as 'Corpo de Policia e Fiscalização da India' (C.P.F.I.). It was reorganised in 1936 when rules were formulated for recruitment and functioning. In 1946, the Civil Police, named as 'Policia do Estado da India' (P.E.I.) was created and the staff of the former 'Corpo de Policia e Fiscalização da India', was absorbed in the new set up. The rules and regulations for the working of the 'Policia do Estado da India' was formulated in the year 1948.

When 'Corpo de Policia e Fiscalização da India' was created within the Military services, the respective order mentioned that this unit would look after the Police duties exclusively and supervise over liquor distilleries, sale of tobacco, etc. and would assist the rural Police and the Forest Guards whenever required as per the rules. The 'Corpo de Policia e Fiscalização da India' comprised as headquarters at the centre was located at Panaji. Three companies with its headquarters located at Bicholim, Panaji and Margao were looking after the police duties in the district. The jurisdiction of the Company with headquarters located at Bicholim extended over the talukas of Bardez, Pernem and Bicholim; of the one with headquarters located at Panaji extended over the talukas of Tiswadi and Ponda and the last company with headquarters located at Margao extended over the talukas of Salcete, Mormugao, Sanguem, Quepem and Canacona. The Companies were divided into police stations, which were further

divided into outposts. The total strength of officers and men at the time was 789.

They were allotted the duties of maintenance of public security, civilian life and property, and to take all necessary steps to get the law and order executed. They had to look after road traffic, control of crowds in public places and during religious processions, public meetings, etc. There were special duties to be performed towards railway traffic. They had to help the municipalities and other civil departments in the implementation of their rules and regulations, special duties were allotted to them over liquor distillery and the sale of country liquor, special problems like gambling, prostitution, etc. had also to be looked after.

Most of the senior officers were Europeans from the army. The 'Commandantes' of the Companies were Captains of the Army. There was a Police Bank and a private doctor.

Crime was negligible, criminal investigations were entrusted to the 'Commandantes' of Companies under the direction of the 'Primeiro Commandante'.

There were no problems as regards road traffic, as the number of motor cars and tangas was very much less. The number of buses was also limited.

However, the main work the Police had, was the vigilance over the liquor distilleries and the control over the sale of country liquor and tobacco.

The duties of the police towards the railway traffic were to keep a strict watch over the people coming from outside with a view to avoiding the entrance of people of bad character and of those suffering from contagious diseases.

With the establishment of Civil Police known as 'Policia do Estado da India' in 1946, and with the enactment of the rules for the working of the same in 1948, the Police Administration came under the purview of Central Zone. The number of men (Constables and Head Constables) was reduced from 814 to 550 and many outposts were closed. The work of Police investigations was entrusted to 'Agentes' who had special training in this matter. They were accommodated in a separate branch named 'Quadro Especial'. A finger print section was also created.

With the declaration of a state of emergency in the district in 1954, the powers of the police were enhanced so that they could repeal the armed attacks launched by the freedom fighters. Vigilance within the territory was strengthened in order to suppress the freedom move-

ment. The Police Officers were given power to arrest a person and detain him for 15 days without any warrant or without even informing the Magistrate.

Most of the top ranking posts were occupied by Army Officers serving on deputation in the Police. Police stations in the district were classified into A, B, and C, based on their importance. The total strength of Police force in the district upto the time of Liberation was 1,208.

Organisation

Though the first recruitment after liberation was made in 1962, the reorganisation of the Police force in the district was taken up in 1965 with a view to bring it on par with similar organisations in the rest of the country. It was partially brought into effect from April 1, 1966. The Police Force has been split up into 3 sections, *viz.* (1) Executive Force, (2) Goa Armed Reserve Police Force and (3) Criminal Investigation Department. A Police training school at Valpoi imparts training to new recruits and the pre-liberation staff.

The Police Department is headed by the Inspector General of Police with his headquarters located at Panaji. He is assisted in his work by 2 Deputy Superintendents of Police, 14 Police Inspectors, 55 Police Sub-Inspectors and 32 Assistant Sub-Inspectors. They have under them 377 Head Constables and 1557 Police Constables. The department had a ministerial staff of 57 during the year 1970-71.

In 1972, the department had 19 Police Stations including the Railway Police Station, 23 outposts and the Criminal Investigation Department, comprising the Special branch, the Foreigners branch, the Crime branch and Enforcement branch. The Armed Police consists of four active companies of Goa Reserve Police, the Headquarters Company, the Training Platoon, the Bank Platoon, the Gas Squad, the Wireless section and the Motor Transport section. While the Goa Reserve Police and the Motor Transport section is composed of 1 Deputy Superintendent of Police, 3 Police Inspectors, 5 Police Sub-Inspectors, 18 Assistant Sub-Inspectors, 100 Head Constables and 461 Police Constables, the Criminal Investigation Department consists of 1 Deputy Superintendent of Police, 6 Police Inspectors, 22 Police-Sub-Inspectors, 1 Assistant Sub-Inspector, 62 Head Constables and 34 Police Constables.

Motor Transport Section

The Motor Transport section looks after the maintenance and repairs of vehicles allotted to Cabo Raj Niwas and the Ministers in addition to the vehicles owned by the department. In 1969 the department

had 42 light vehicles, 4 medium vehicles, 6 heavy vehicles and 18 motor cycles besides a trailer pump and a fire tender.

Fire Service Unit

In the absence of fire fighting facilities in the district, the Police also undertake the responsibility in this regard and a fire fighting unit has been established at the headquarters i.e. Panaji. In addition to the equipment and fire appliances, a Mobile Fire Fighting Vehicle which its respective accessories was acquired by the Administration in August 1969. As it was decided to have the Fire Fighting Services Unit organised and functioning under the Police Department and in view of the fact that personnel were required to handle these equipments in the absence of trained staff, some of the men from the Goa Reserve Police were trained at the Andhra Pradesh Fire Services Training College, Hyderabad in Fire rescue work to form, in the meantime, the nucleus of the Fire Services Unit.

Goa Police Wireless Grid

By the end of the year 1972, there were nine wireless stations in the territory in operration. The Wireless Grid is composed of 1 Police Sub-Inspector, 36 wireless operators and 2 Radio mechanics. A proposal for every Police Station to have a wireless set has already been made to the Government and the day is not far off when every police station in the district of Goa will be connected over the wireless.

Health

The health of the Police personnel is generally satisfactory. The Police Medical Officer treated most of the cases.

Housing

The Police Personnel is provided residential accommodation in ten private houses and two blocks of 24 quarters each constructed at Altinho, Panaji. Proposal for the acquisition of building from military authorities at Valpoi, Bicholim and Mhardol is under consideration. Land for the construction of buildings for Police Stations and for residential accommodation has been located at Margao, Ribandar, Ponda, Canacona and Chicalim.

Goa Police Montepio

This welfare association was established prior to Liberation by way of contribution from the entire staff of this department and by raising funds through various social and other cultural activities etc. organised in aid of the Association. This 'Montepio' caters to the needs of the staff of this department and their families to some extent by providing residential quarters constructed for the benefit of its

members. It also provides other reliefs and amenities to the staff of the Department by way of loans, etc. As far as accommodation is concerned 209 residential quarters viz. 68 at Altinho, Panaji, 12 at Ponda, 12 at Mapusa, 12 at Bicholim, 23 at Valpoi, 28 at Vasco-da-Gama, 12 at Sanguem, 42 at Margao have been distributed to the Officers and men of this Department at very nominal rates, thereby alleviating to some extent the problem of accommodation.

Goa Police Welfare Fund

The Goa Police Welfare Fund has been raised by way of half yearly subscriptions from Police Officers and men and performances of dramas, wrestling and other matches besides other open-air competitions, with a view to providing amenities and comfort to policemen and their families and other low paid staff of the department. The total average annual subscription itself comes to about Rs. 3,000·00. Loans are also granted in special cases recoverable in suitable instalments with interest @ 6 per cent. Under the Fund, two canteens and two recreation centres are conducted for the benefit of Police personnel and their families.

Police Training School, Valpoi

A Police Training School has been established at Valpoi where Police are given training in Law, investigation, physical training, handling of arms, control of traffic and crowds, etc. Training is also imparted to Excise Inspectors, Jail Guards and Drill Instructors. It has been housed in an old establishment at Valpoi. It is composed of 1 Deputy Superintendent of Police, 1 Police Sub-Inspector, 5 Head Constables and 5 Police Constables. During the year 1972-73, 4 Police Officers were sent for training and three batches comprising of a total of 124 recruits were trained at the Police Training School, Valpoi. Two batches of Head Constables and Police Constables also underwent six weeks Refresher Course in Law and Police Procedure, Prevention and Detention of Crime, etc.

Home Guards

Though Home Guards Organisation has been established at Panaji, it has received very poor public response. Vigorous efforts made by the Government in this regard, has made it possible to recruit and train 349 persons during 1972.

Police Band

The Goa Police Band Platoon comprising 1 Assistant Sub-Inspector, 3 Head Constables and 26 Police Constables is detailed mostly for official functions and occasionally for private engagements on payment. The amount collected as Band charges in case of private engagements

is distributed as follows : 40 per cent for Band fund ; 15 per cent for the Band-master and 45 per cent for the Bandsmen.

Goa Police Sports Club

The Goa Police Sports Club is constituted under the presidentship of the Inspector General of Police to promote all sports and athletic activities for the police personnel in the territory. It organised the Police Cup Football Tournament and the annual Police Sports and Athletic meets as usual.

Crime

Though a spurt is found in total crime—cognizable as well as non-cognizable at times, the trend of crime shows a gradual decrease. To improve the standard of investigation and preventive action by the Police, a number of steps have been taken. To assist the Police stations in difficult cases of murder, dacoity and other serious offences, a specially trained crime team has been constituted in the Criminal Investigation Department. The Department has a 'dog squad' to assist the police in tracking down the criminals. Night patrolling has also been introduced. Whenever a large number of thefts or house breaking are reported, a special *nakabandis*, surprise checks and raids at the criminal dens are carried out.

Table No. 1.—gives the statistics of crime from 1962 to 1970.

INSPECTOR GENERAL OF PRISONS

Origin and Development

During the imperialist Portuguese regime, prior to the liberation of the territory, the administration of jails in the territory, was entrusted to 'Procuradoria de Republica' besides other functions. There were in the territory five jails in the five 'Comarcas' of Tiswadi, Bardez, Salcete, Quepem and Bicholim and two jails in two 'Julgados' of Mormugao and Ponda. The 'Comarca' jails were looked after by the 'Delegados' and 'Julgados' jails were looked after by the 'Sub-Delegados'.

After Liberation, the office of the 'Procuradoria de Republica' came under the administrative control of the Law Secretary and Assistant Public Prosecutors were appointed ex-efficio Superintendents of Jails. The former office of 'Procuradoria de Republica' was renamed as an office of the Inspector General of Prisons *cum* 'Procuradoria de Republica' from March 1, 1968. At present there is a Central Jail at Aguada, one sub-jail at reis Magos and three subjails *cum* judicial lock-ups at Panaji, Margao and Mapusa. The department is headed by the Inspector General of Prisons. The total

TABLE No. 1.—STATISTICS ON CRIME FOR THE YEARS 1962 TO 1970 IN GOA DISTRICT

Serial No.	Offences	1962	1963	1964	1965	1966	1967	1968	1969	1970
1	Murder	19	13	13	15	10	17	16	14	14
2	Attempt to Murder	7	3	..	1	4	7	8	1	1
3	Culpable Homicide	1	3	..	..	2	..	1	2	..
4	Dacoity including preparation	9	8	3	5	5	7	3	4	4
5	Robberies	50	55	41	45	28	20	19	19	13
6	House breaking and theft by day	29	46	73	76	88	65	51	47	49
7	House breaking and theft by night	264	204	198	295	316	276	247	285	279
8	Thefts	495	555	610	660	675	586	415	395	371
9	Receiving stolen property	4	12	1	10	7	1	..	..	1
10	Cheating	..	38	30	33	22	32	15	19	18
11	Criminal Breach of Trust	58	71	81	67	69	56	65	67	60
12	Mischief	67	58	58	64	43	39	22	36	12
13	Rioting	17	20	43	37	35	37	24	16	13
14	Unlawful Assembly	2	..	..	7	9	3	3	1	8
15	Escape from lawful custody	..	5	7	10	9	3	6	7	..
16	Hurt cases	232	112	166	165	188	224	173	150	103
17	Kidnapping or Abduction	11	19	17	14	6	8	5	9	8

TABLE No. 1—contd.

Serial No.	Offences		1962	1963	1964	1965	1966	1967	1968	1969	1970
18	Assault on Public Servant		46	51	33	33	27	31	24	18	15
19	Anti-corruption cases		..	..	1	5	5	3	1	2	..
20	Smuggling			..	..	..	..	2	27	30	12
21	Other Offences		214	201	292	284	365	361	201	219	213
		Total	1,525	1,474	1,667	1,826	1,913	1,778	1,326	1,341	1,194
1	Sections 269, 277, 279, 280, 283 of IPC		..	..	..	..	49	65	21	25	12
2	Arms Act		20	23	19	24	8	2	9	7	15
3	Gambling Act		58	46	12	57	61	59	26	..	..
4	Essential Commodities Act		..	..	..	..	24	12	4	4	3
5	Explosive Act and Explosive Substance Act		8	2	1	..	3	1	2	1	..
6	Dangerous Drugs Act		..	..	..	..	2	3	2	2	6
7	Criminal Law Amendment Act		..	..	..	..	15	..	..	..	..
8	Immoral Traffic in Women and Girls Act		..	..	..	..	3	1	1	1	..
9	Registration of Foreigners Act and Rules		..	..		..	4	6	30	26	9
10	Other special and local laws		13	10	24	56	32	1	6	2	3
		Total	99	81	56	137	201	150	101	68	48
		Grand Total	1,624	1,555	1,723	1,963	2,114	1,928	1,427	1,409	1,242

strength of the Jail Department was 147 of which 21 were members of the administrative staff and 126 of executive type during the year 1972-73.

The department looks after the jail administration including discipline and budget work and control over the expenditure. The activities of the office of the Inspector General of Prisons are governed under the Acts and Rules made under them.

The Acts and Rules in force in the Union Territory in connection with the Prisons matters are given under Appendix 23.

Classification of Prisoners

Prisoners are classified as Class I or Class II as per the provisions laid down under the Goa, Daman and Diu Prisoners (Admission, Classification and Separation of Prisoners) Rules, 1968. Prisoners of Class I and Class II are accommodated in separate yards provided for the purpose. A convicted Class I prisoner is entitled to have an interview every fortnight and is allowed to write four letters, two at Government cost and two at his own. The Juvenile delinquents are sent to the certified school at Kanpur as there is no such institution in this Union Territory. No special mention in respect of political prisoners is made in the rules framed. Persons detained under the Maintenance of Internal Security Act, 1971 and Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 are also kept in the Central Jail unless they are transferred outside the territory.

Work

According to the Goa, Daman and Diu Prisons (Employment of prisoners) Rules, 1968, work, like book-binding, envelop-making, sewing, cane work, carpentry, etc. is allotted to the prisoners. No menial duties are allotted to Class I prisoners. Under-trial prisoners are not bound to do work unless they so desire.

Board of visitors

A meeting of the Board of Visitors is held every three months. The duties assigned to the Board of Visitors are (*a*) to inspect the barracks, cells, wards, work-sheds and other buildings of the prisoners; (*b*) to ascertain whether (*i*) consideration of health, cleanliness and security are attended to and whether the (*ii*) proper management and discipline are maintained in every respect and (*c*) to examine : (*i*) the registers of convicted and under-trial prisoners, (*ii*) the punishment book and (*iii*) other prison registers containing entries relating to prisoners, etc.

Discipline

Discipline among the prisoners is maintained according to the provisions laid down in the Goa, Daman and Diu Prisons (Discipline) Rules, 1968. Discipline is also maintained among the staff of the department.

Various training-*cum*-production schemes have been introduced in the Central Jail at Aguada for imparting training to convicts in various crafts such as tailoring, carpentry and bakery and agro-horticultural work. This has been done with a view to helping them for their rehabilitation after their release and earning wages during confinement.

Stitiching work of various Government departments such as the Police, the Excise, the Navigation and the Public Works Department is undertaken by the Tailoring section in the Central Jail. The carpentry section has manufactured several articles of furniture for sale and also undertakes the work of the Education department such as the manufacture of desks and tables, etc. Bakery section supplies bread to the prisoners and the staff which was previously done by a private agency. Now this is being made by the bakery of the jail itself started from August 1968 and run by the prisoners themselves.

The Central Jail maintains a garden in which roses and other variety of paints, seeds and plantations specially brought from Bangalore ar1 other parts of India are grown. It may also be interesting to note that at the Central Jail, Aguada and Sub-Jail, Reis Magos, food for prisoners is prepared in the mess by the prisoners themselves. The food to the prisoners confined in the case of other jails is supplied by private hotel proprietors.

Recreation

To provide recreational facilities to the prisoners, newspapers are supplied to the prisoners at Aguada. Films are exhibited. Facilities are provided for various games such as volley-ball, carrom, chess, etc. Radios have also been installed in the jails.

Office of the Probation Officer

The office of the Probation Officer came into existence in January 1970 with the appointment of a regular Probation Officer. The office of the Probation Officer provides for a penal non-institutional treatment of offenders. This system has been developed as an alternative to imprisonment out of a realisation that short term sentences, especially in case of juveniles and youthful offenders were not only ineffective, but also harmful, as these brought young offenders in contact with the confirmed criminals in prisons and most of all

removed their fear of the unknown, viz. prisons. Probation is one more step in the progressive realisation that the sentence should feel the offender and not the offence.

The Probation Officer is working under the following Acts :—

(*i*) The Children Act, 1960;

(*ii*) The Probation of Offenders Act, 1958; and

(*iii*) The Goa, Daman and Diu Prevention of Begging Act. 1972.

The total staff is two as per the following break-up :—

1. Probation Officer (Class II Gazetted).
2. L.D.C. (Class III Non-Gazetted).

The Goa, Daman and Diu Children Rules, 1972, have been notified in April, 1972. The Goa, Daman and Diu Probation of Offenders Rules, 1974 have also been notified in August, 1974. An institution under the Children Act, 1960, is likely to be established in the near future.

During the calender year 1974, the number of cases referred for investigation is 235 as against 208 in 1973. The number of persons placed under supervision is 38 for the year 1974 as against 31 in 1973.

JUDICIAL DEPARTMENT

Administration of justice in retrospect

At the first instance when Albuquerque conquered Goa in 1510 A.D., the administration of justice was vested in village communities. The population could get injustice redressed easily. With the establishment of the Portuguese rule over the territory, the administration of justice in the colony was mainly regulated according to the law obtaining in Portugal, but in certain respects modifications were introduced to suit the peculiar circumstances prevailing in the territory specially in case of personal laws relating to the Hindus, the usages of which were codified for the first time in 1526.[1] In the early days of the Portuguese rule, justice was dispensed by a judicial functionary called the 'Ouvidor Geral' who exercised both civil and criminal jurisdiction in the settlement. In 1544, a High Court presided over by a Chancellor was organised under the Appellation of the 'Relaçẽo de India' having its seat in Goa but its jurisdiction extending over all the Portuguese positions in the East. The judges of the High Court were known as 'Desembargador'. The 'Desembargador', being the 'Procurador General de Corôa de Fazenda', carried

[1] Gune V. T., "An Outline of the Administrative Institutions of the Portuguese territories in India and the growth of their Central Archives at Goa, 16th to 19th century A.D." in *Studies in Indian History* (Dr. A. G. Pawar Felicitation Volume) Kolhapur, 1968, pp. 78-81.

out the functions of the Government Pleader. Subsequently, several alterations were effected in its constitution, the principal among them being those relating to the number of judges, which in 1587 numbered 10, in 1628, 5, and in 1748, 6. It continued in existence in upwards of two centuries. In 1774, it was abolished and again an 'Ouvidor Geral' was solely invested with the powers conferred upon and exercised by this defunct tribunal. In addition to other duties the 'Ouvidor Geral' was empowered to hear appeals from the decision of the judges of the District of the 'Velhas Conquistas' (Old Conquests) who were called 'Ouvidors'. In 1763, the 'Novas Conquistas' (New Conquests) were placed under an official invested with the judicial powers called 'Intendente Geral das Novas Conquistas' (Intendant General of the New Conquests).

However, these arrangements came to a close in 1776/1778, when it was superseded by the aforesaid High Court. The High Court had four judges and one *Mortabugar* (an official with the authority to put a seal) This tribunal was completely reorganised in 1836. However, it faced closure twice before, its place having been taken on the first occassion by a bench called 'Junta de Justica' which lasted from 1822 to 1827 and on the second occasion a court called 'Tribunal de segunda instancia' which continued for only two years from 1835 to 1836.

Each parish was superintended by a Justice of Peace whose duty it was to arbitrate between litigants in civil suits excepting those affecting the interests of minors, lunatics, etc., as well as those relating to mortmain. It was also required to institute preliminary inquiries into criminal matters previous to their submission for trial before the competent judicial authorities, to try municipal offences and decide petty suits. Against the decision of the Justice of Peace, an appeal lay with the Court of Judge of higher jurisdiction called 'Juiz Ordinario'. The office of the Justice of Peace was honorary.

In every 'Julgado', a sub-division of a 'Comarca' there was one 'Juiz Ordinario' with an establishment consisting of a sub-delegate to the Attorney General, two clerks, two or more bailiffs and a translator or an interpreter. The 'Juiz Ordinario' had full jurisdiction over certain civil and criminal suits and against these decisions no appeal could be made to any tribunal. He made preliminary investigations in regard to those cases which were heard by a 'Juiz de Direito'. The rank of 'Juiz de Direito' was identical with that of a District Judge in other parts of the country He was in charge of a 'Comarca' and had a staff comprising a delegate of the Attorney General, three clerks, one interpreter and translator, an accountant and four or five bailiffs. The Judge of this Court exercised both ordinary and extraordinary jurisdiction in matters of civil as well as criminal cases. The supervision

over the above judges was entrusted to a High Court (Tribunal de Relacão) which was located at Nova Goa, in consequence of which it was called 'Relacão de Nova Goa'. This court consisted of the Chief of Justice (Presidente) and three judges with a staff comprising of one Attorney General, an Assistant Attorney General, a Registrar, two Assistant Registrars, one Accountant and two bailiffs.

The High Court had jurisdiction, both ordinary and extraordinary, in all cases, whether civil or criminal, and was invested with Appellate powers. An appeal against its decisions in certain cases could be made to the Supreme Tribunal in Portugal.

The Penal Code was approved of on 10th December 1852 and was extended to the Portuguese possessions in the country and other Overseas Provinces of Portugal from 1854. In 1856, the section in the Penal Code about exiling criminals was suspended in respect of Hindu criminals and instead they were given rigorous imprisonment in the Docks. However, the section exiling the criminals was again made applicable to the Hindus in 1870.

After the adoption of the Constitution of Judicial Reform by the enactment of May 21, 1841, some more changes were introduced by the laws of 16th June, 18th and 21st July 1855 and by the Decree of 9th July and 30th October, 1855. The Reforms of 1841 were put into effect from January 1, 1864.

In 1864 (5th March) four 'Julgados' were created with their headquarters at Pernem, Sanquelim (later on at Bicholim), Ponda and Quepem. Two more 'Julgados' were created in 1866 with headquarters at Assolna and Calangute. In 1870, Code Napoleon was made applicable to the Portuguese possessions in India and slight modiffications to suit the local conditions, and death penalty was abolished except in cases of military crimes.

By the Decree of 14th November 1878, the number of judges in Relacao de Goa (High Court) was increased by one more; and according to the law of April 1874, two more 'Comarcas' were created with headquarters at Sanquelim and Quepem, the 'Julgados' of Goa, were discontinued; and the 'Comarcas' were further divided into small 'Julgados' by the same Decree.

Subsequently, the decree of 4th August 1881; the 'Reforma Penal' of 4th June 1884; the 'Codigo Penal' of 16th September 1866; the Regiment of 20th February 1894 and Decrees of 'Governo Provisorio da Republica' of 10th October 1910, repealing all the laws with the exception of a few were published.

In keeping with 'Organizacâo Judiciaria das Colonias' approved by Decree No. 14, 453 dated 20th October 1927, 'Estado da India'

formed a judicial district, with the headquarters at 'Cidade de Goa', comprising the provinces of 'India Portuguesa', Macao and Timor. The High Court was composed of five 'Juizes Desembargadores'. One of them was appointed as President by the Overseas Minister.

In the High Court, the Attorney General used to represent 'Ministério Público' and he was also the Judicial Magistrate. He was appointed on deputation by the Minister of Overseas.

The Judicial District of India was divided into eight 'Comarcas', six being in 'Estado da India' and one in each of the provinces of Macao and Timor. A 'Magistrado Judicial da 1*a* Instancia' denominated 'Juiz de Direito' was in charge of each 'Comarca'. There was also a General Curator as a representative of 'Ministerio Publico'.

The 'Comarcas' were sub-divided into 'Julgados Municipais' and these were further sub-divided into 'Freguesias' or parishes.

There were 2 'Julgados Municipais', one each at Ponda and Mormugao.

At the head of 'Julgado Municipal Especial' was the 'Juiz Municipal' in the same category as 'Delegado da Comarca'.

By virtue of legislative Diploma No. 4 dated 6th May 1952, the 'Juizes Delegados Municipais' of Mormugao and Ponda had the power to judge at '1*a* instancia' (First Class) all suits and crimes which did not pertain to 'Juiz Especial'.

In what follows is described in brief the judicial system as it prevailed few years prior to Liberation in a nut-shell. A High Court, (Relacão da Goa), was located at Panaji, and the control of various Courts was vested in the High Court. Presided over by the Chief Justice. there were four more judges and they were known as 'Desembargadores'. The Chief Government Pleader appeared in cases concerned with the Government. The Chief Prosecutor, known as 'Procurador de Republica', also used to act as Legal Adviser to the Government. The entire territory was divided into five divisions for judicial administration. and these divisions were known as 'Comarcas'. The following statement gives the judicial divisions, as also their headquarters, in the territory.

Judicial Divisions	*Headquarters*
1. Tiswadi and Ponda ...	... Panaji
2. Salcete and Margao ...	... Margao
3. Bardez and Pernem ...	... Mapusa
4. Sanquelim and Satari ...	... Bicholim
5. Quepem, Sanguem and Canacona	... Quepem

Appeal against the decisions of the Lower Court lay with the High Court of the 'Comarca', as also to the High Court at Panaji. In some cases appeals against the decision of the High Court at Panaji could be made to the Supreme Tribunal at Lisbon. The jurisdiction of the High Court at Panaji extended over Macao and Timor.

Besides the Civil Courts mentioned above, there was a military court also located at Panaji. Its President and one of the members belonged to the Police and Army and the judge of the High Court at Panaji acted as the 3rd member. Instead of 'Procurador de Republica' all the work was done by Army Officials. The Governor General could bring anyone to the Court under the charges of conspiracy against the State, etc., The appeals against the decisions of this Court could be made to a Higher Court composed of 5 members which was formed by adding two more members to the existing Court. An appeal against their decision could be made to the Supreme Tribunal at Lisbon.

Registry of Predial Tax

With the headquarters at each 'Comarca', there was a registry of 'Registo Predial' whose services were privately incumbent on a magistrate called 'Conservador do Registo Predial'.

Publiq Notaries

The notaries were Government employees of permanent service, appointed among the Bachelors and Doctors of arts, who had been approved of in competitive tests for similar posts in 'Metropole'. Their duties in the 'Comarcas' and 'Julgados' were discharged by 'Escrivâes do Direito e do Julgado'.

LAW COMMISSION

With a view to replacing Portuguese Laws by Indian Laws the office of the Law Commission was constituted on July 18, 1968. The office of the Law Commission was headed by the officer on Special duty who was assisted by one Research Officer and other necessary ministerial staff. Besides the Speaker of the Legislative Assembly who acted as the Chairman, the Law Commission was composed of the Law Secretary and the District and Sessions Judge.

Organisation

The Portuguese laws were applicable to the district as the same was under the Portuguese suzerainty prior to Liberation. With Liberation, it was thought prudent to introduce the Indian laws in the territory, with a view to avoiding confusion in the simultaneous

application of two sets of laws and legal systems. It was felt essential to examine the Portuguese legislation in force then, to be replaced by the corresponding Indian laws.

Functions

The Law Commission, as has been mentioned earlier, undertook the work of examining all the Portuguese laws, Decrees, *Portarias*, Legislative Diplomas, etc., in force at the time of liberation. The policy of the Law Commission was to examine all the Portuguese laws passed from 1910 upto the liberation of the territory and some other Legislation such as Civil Code passed in 1867. All this was to be done with a view to repeal, amend or retain the Portuguese laws suitably and to change over to the corresponding Indian laws in course of time.

Contribution

Though the Office of the Law Commission was established on July 18, 1968, the first meeting of the Commission was held on September 10, 1969.

By March 1970, the Commission had scrutinised all the Laws, Decrees, *Portarias*, Legislative Diplomas, etc., issued between 1957 and 1961. The translations of the Laws, Decrees, *Portarias*, Legislative Diplomas, etc., from 1940 onwards was also completed.

The Law Commission considered repealing all the Portuguese Laws through suitable Bills in Parliament barring some useful legislation and devoting greater care to the matter of Personal laws. The Commission examined such Central Acts which are applicable to the whole of India and yet not extended to the territory. The Commission prepared the list of Central Acts to be extended to this territory and also a separate list of Personal Laws. On the subject of Personal Laws the Commission invited the views of some prominent Lawyers and Jurists of this territory. A questionnaire was also sent to all advocates and prominent persons in the field. A third list of those Portuguese Acts which the Commission recommended to be retained, for which there were no corresponding Indian Legislations, was also prepared. The Commission had already drafted a Bill with two schedules, one extending some more Indian Laws and the other enlisting some Portuguese Laws or part thereof to be retained with necessary repeal and saving clauses.

The Law Commission was, subsequently wound up by the end of March 1971. However, the implementation of the report of the Law Commission is under consideration of the Government.

LAW AND JUDICIARY DEPARTMENT

Immediately after Liberation, the Union Territory was governed under the Portuguese Laws. In 1962, steps were taken to extend the Indian Laws to the Union Territory. The Goa, Daman and Diu (Laws) Regulation, 1962 was promulgated whereby 106 Indian Acts were extended to the Union Territory and the corresponding Portuguese Laws stood repealed. In 1963, the Goa, Daman and Diu (Laws) No. 2 Regulation 1963 was promulgated. Under this Regulation, about 70 Indian Acts were extended and corresponding Portuguese Laws stood repealed. The matters not covered by Indian laws continued to be dealt with under the Portuguese Laws. About 25 Indian Acts were further extended to this territory. After Liberation about 67 Acts have been passed by the Legislative Assembly of this Union Territory so as to bring the legal system on par with the rest of the country.

Immediately before liberation the highest Court in this Union Territory was the 'Tribunal de Relação'. In the year 1963 this Tribunal was abolished and a Judicial Commissioner's Court was constituted under the provisions of the Goa, Daman and Diu (Judicial Commissioner's Court) Regulations, 1963. Before the Judicial Commissioner's Court came into existence, the 'Procurador da Republica' used to represent the Government before the 'Tribunal de Relação'. The 'Procurador da Republica' also used to give legal advice to the Government.

Organisation

The Law and Judiciary department of the Secretariat is headed by the Law Secretary, who renders legal advice to the Government and who also continues to function as the 'Procurador da Republica' in respect of some of the Portuguese Laws still in force in the territory. He is assisted by the necessary legal and ministerial staff. The Government Pleader represents the Government before the Court of Judicial Commissioner in all matters in which the Government is impleaded as a Party. The district has one Public Prosecutor who in turn is assisted by two Additional Public Prosecutors. At present, Assistant Public Prosecutors have been appointed with headquarters at Panaji, Margao, Quepem, Ponda, Bicholim and Vasco-da-Gama.

Functions

The Law and Judiciary department of the Secretariat is mainly concerned with:

(*i*) giving legal advice to all the departments of the Government.

(*ii*) drafting and scrutinising all the legislation to be introduced in the Legislative Assembly.

(*iii*) drafting and scrutinising all the statutory notifications, rules, orders, etc.

(*iv*) drafting and scrutinising the deeds and contracts to be entered into between the Government and the private parties, and

(*v*) supervising the Government litigation before the various courts in the Union Territory so as to safeguard the interests of the Government. Besides, the department is 'also administratively concerned with the following offices, viz :—

1. Registration and Notary Services.
2. Prisons Department.
3. Law Commission Office.
4. Electoral Office.
5. Prosecuting Agencies.
6. Judicial Commissioner's Court and Subordinate Courts.
7. Administrative Tribunal.

JUDICIAL COMMISSIONER'S COURT

Prior to the Liberation of the territory, the highest Court was the 'Tribunal de Relação' situated at Panaji. The 'Tribunal de Relação' was abolished and a court of Judicial Commissioner, was established for the district with effect from December 16, 1963 under the Goa, Daman and Diu (Judicial Commissioner's Court) Regulation 1963. In May 1964, an Act was passed by the Parliament which conferred upon the Court of the Judicial Commissioner, Goa, some powers of a High Court for the purpose of the constitution of India. During the year 1968-69, one bench of the Court was presided over by the Judicial Commissioner and the other by the Additional Judicial Commissioner. The office of the Court of the Judicial Commissioner is headed by the Registrar, who is assisted by the necessary judicial, ministerial and technical staff. The total strength of the staff of the Court of the Judicial Commissioner in the year 1969-70 was 56.

The Court of the Judicial Commissioner administers justice as the highest court of appeal and revision for the territory. Appeals lie against both Civil and Criminal suits instituted under the Portuguese as well as Indian laws. Under article 226 it also deals with writ matters.

The following tables give the statistics of the work done by the Court of Judicial Commissioner during the year 1969-70 and 1970-71 :—

TABLE No. 2—WORKING OF THE COURT OF JUDICIAL COMMISSIONER

Serial No.	Nature of the Case	Pending at the beginning of April 1969 (i.e. 1st April 1969)	Institution for the year 1969-70 (i.e. from April 1969 to March 1970)	Disposals for the year 1969-70 (i.e. from April 1969 to March 1970)	Pending at the end of March 1970 (i.e. 31st March 1970)
	A. *Under Portuguese Laws*				
	CIVIL				
1	Apelação	176	64	115	125
2	Agravos	93	44	54	83
3	Civil Revision Applications ..	1	Nil	1	Nil
4	Civil Miscellaneous Applications.	7	16	20	3
5	Application for review (reclamação).	Nil	2	2	Nil
	CRIMINAL				
6	Criminal Appeals (Recursos Penais).	58	9	26	41
7	Application for Review (Reclamação).	Nil	Nil	Nil	Nil
	B. *Under Indian Laws*				
	CIVIL				
8	Civil Suits	Nil	Nil	Nil	Nil
9	Election Petitions	Nil	Nil	Nil	Nil
10	Writ Petitions	30	60	47	43
11	First Appeals	7	17	9	15
12	Second Appeals	4	16	12	8
13	Miscellaneous First Appeals ..	1	11	6	6
14	Miscellaneous Second Appeals .	Nil	Nil	Nil	Nil
15	Civil Revision Applications ..	11	38	39	10
16	Civil References	Nil	1	1	Nil
17	Civil Miscellaneous Applications.	3	37	34	6
	CRIMINAL				
18	Confirmation Cases ..	1	Nil	1	Nil
19	Criminal Appeals ..	20	15	22	13
20	Criminal Revision Applications..	21	26	39	8
21	Criminal References ..	5	25	13	17
22	Criminal Miscellaneous Applications.	1	31	29	3

TABLE No. 3—WORKING OF THE COURT OF THE JUDICIAL COMMISSION

Serial No.	Nature of the Case	Pending at the end of March 1970 (i.e. 31st March 1970)	Institution for the year 1970-71 (i.e. from 1st April 1970 to 31st March 1971)	Disposal for the Year 1970-71 (i.e. from 1st April 1970 to 31st March 1971)	Pending at the end of March 1971 (i.e. 31st March 1971)
1	2	3	4	5	6
	A Under Portuguese Laws				
	I Civil				
1	Apelação	125	62	75	112
2	Agravos	83	43	63	63
3	Civil Revision Applications ..	*Nil*	2	1	1
4	Civil Miscellaneous Applications	3	12	12	3
5	Applications for review (Reclamação).	*Nil*	2	2	*Nil*
	II. Criminal				
6	Criminal Appeals (Recursos Penais).	41	3	32	12
7	Application for review (Reclamação).	*Nil*	*Nil*	*Nil*	*Nil*
	B. Under Indian Laws				
	III. Civil				
8	Civil Suits	*Nil*	*Nil*	*Nil*	*Nil*
9	Election Petitions .	*Nil*	*Nil*	*Nil*	*Nil*
10	Writ Petitions .	43	43	41	45
11	First Appeals .. .	15	39	22	32
12	Second Appeals	8	21	15	14
13	Miscellaneous First Appeals .	6	19	16	9
14	Miscellaneous Second Appeals .	*Nil*	*Nil*	*Nil*	*Nil*
15	Civil Revision Applications .	10	48	44	14
16	Civil References .	*Nil*	4	2	2
17	Civil Miscellaneous Applications	6	20	25	1
	IV. Criminal				
18	Confirmation Cases .	*Nil*	*Nil*	*Nil*	*Nil*
19	Criminal Appeals . ..	13	12	19	6
20	Criminal Revision Applications	8	29	32	5
21	Criminal References ..	17	8	25	*Nil*
22	Criminal Miscellaneous Applications	3	15	18	*Nil*

District and Sessions Court

The District and Sessions Court came into existence for the first time after Liberation in November 1963, and became a full-fledged District Court when the Goa, Daman and Diu (Civil Courts) Act, 1965 was enacted and the Civil Procedure Code, 1908 was brought into force in the territory of Goa, Daman and Diu from June 15, 1966. The District and Sessions Judge also works as Special Judge in cases under the Prevention of Corruption Act, 1957. The District and Sessions

Judge has his headquarters at Panaji while the headquarters of the Additional District and Sessions Judge is located at Margao. There is also an Additional District Judge with headquarters at Panaji. The District and Sessions Judge with headquarters at Panaji and the Additional District and Sessions Judge with headquarters at Margao also function as the members of the Claims Tribunal. The jurisdictions of the District and Sessions Judge, Panaji, for this purpose, extends over the talukas of Tiswadi, Bardez, Pernem, Bicholim and Satari, while that of the Additional District and Sessions Judge, Margao extends over the talukas of Salcete, Mormugao, Ponda, Quepem, Sanguem and Canacona. The office of the District and Sessions Court is headed by the Superintendent. The total strength of the staff as on March 31, 1970 at the office of the Court of the District and Sessions Judge was 17.

The Court of the Sessions Judge was only dealing with Appeals, etc., in criminal matters instituted after the enforcement of the Criminal Procedure Code, 1898 and the Indian Penal Code, 1860 from November 1963 to June 15, 1966. Since June 15, 1966 the District and Sessions Court deals with matters as provided in the Civil Courts Act, 1965 and the Code of Criminal Procedure, 1898.

The following tables give the statistics regarding the litigations in the District and Additional District and Sessions Courts during 1969-70 and 1970-71.

TABLE No. 4.—STATISTICS REGARDING THE LITIGATIONS IN THE DISTRICT AND ADDITIONAL DISTRICT AND SESSIONS COURTS DURING 1969-70.

Serial No.	Nature of the Case	Pending at the beginning of April 1969 (i.e. 1st April 1969)	Institution for the year 1969-70 (i.e. April 1969 to March 1970)	Disposals for the year 1969-70 (i.e. April 1969 to March 1970)	Pending at the end of March 1970) i.e. 31st March 1970)
1	2	3	4	5	6
	CIVIL CASES				
1	Civil Appeals	13	167	87	100
2	Suits	23	65	33	55
3	Civil Miscellaneous Applications	3	38	32	9
4	Land Acquisition cases ..	13	28	..	11
	CRIMINAL CASES				
5	Session Cases	7	27	17	14
6	Criminal Appeals	38	174	123	89
7	Criminal Revision Applications ..	19	85	76	28
8	Criminal Miscellaneous Applications.	....	73	60	13
9	Special Cases	....	1	....	1

TABLE No. 5.—WORKING OF THE COURT OF JUDICIAL COMMISSIONER

Serial No.	Nature of the Cases	Pending at the beginning of April, 1970 (i.e. 1st April, 1970)	Institutions for the year 1970-71 (1st April, 1970 to 31st March, 1971)	Disposals for the year 1970 (i.e. 1st April, 1970 to 31st March, 1971)			Pending at the end of March 1971 (i.e. 31st March 1971)	Remarks
				District and Sessions Judge, Panaji	Addl. District and Sessions Judge, Margao	Addl. Sessions Judge, Mapusa		
1	2	3	4	5	6	7	8	9
	CIVIL CASES							
1	Civil Appeals	100	191	72	3	..	216	Till 30th December 1970, the Additional Sessions Judge had his headquarters at Panaji and with effect from the same day it has been shifted to Mapusa.
2	Suits	55	18	5	..	...	68	
3	Civil Miscellaneous Applications	9	20	20	....	..	9	
4	Land Acquisition Cases	31	71	1	.	....	101	
	Total (Civil Cases)	195	300	98	3	..	394	
	CRIMINAL CASES							
5	Session Cases	14	27	....	9	5	27	
6	Criminal Appeals	89	171	62	33	5	160	
7	Criminal Revision Applications	28	95	19	12	2	90	
8	Criminal Miscellaneous Applications.	13	51	50	6	...	8	
9	Special Cases	1	3	1	....	....	3	
10	Review Applications	....	4	1	..	....	3	
	Total (Criminal Cases)	145	351	133	60	12	291	
	Grand Total (Civil and Criminal)	340	651	231	63	12	685	

Subordinate Courts

Prior to the Liberation of the territory the subordinate courts were known as 'Comarca' Courts and 'Julgado' Courts. The Subordinate Civil Courts of the Judges of the Senior Division and the Junior Division were constituted under the Goa, Daman and Diu Civil Courts Act, 1965. The subordinate 'Comarca' Courts were converted into Courts of Civil Judges, Senior Division and the 'Julgado' Courts were converted into Courts of Civil Judges, Junior Division.

The subordinate courts continued to exercise the same jurisdiction as prior to Liberation upto November 1, 1963. Since that day, these courts deal with criminal cases instituted under the new laws. On the civil side they continued to exercise the jurisdiction exercised by them prior to the Liberation. Since June 15, 1966 they are working either as Civil Courts, Senior Division or as Civil Courts, Junior Division. Two Senior Judges, one each at Panaji and Margao have been invested with powers of the Additional Sessions Judge.

The following table gives the organisation of Civil and Criminal Courts in the district of Goa as on March 31, 1971.

TABLE No. 6.—NUMBER OF CIVIL AND CRIMINAL COURTS IN GOA DISTRICT

Station	No. of Civil and Criminal Courts	
	Senior Division	Junior Division
Panaji	2	1
Mapusa	1*	1
Bicholim	1	—
Margao	1	1
Quepem	1	—
Ponda	—	1
Vasco-da-Gama	—	1
Total	6	5

* The Judge appointed to this post is working on the Civil side as Civil Judge Senior Division, and on the Criminal side as Additional Sessions Judge.

The following tables give the collective statistics of the work done by those courts in 1969-70 and 1970-71.

TABLE No. 7.—STATISTICS OF THE WORK DONE BY THE SUPORDINATE COURTS DURING 1969-70

Serial No	Nature of the Case	Pending at the beginning of April 1969 (i.e. 1st April 1969).	Institution for the year 1969 -1970 (i.e. April 1969 to March 1970)	Disposals for the year 1969-70 (i.e. April 69 to March 1970)	Pending at the end of March-70 (i.e.as at 31 March 1970)
1	No. of Civil Cases under Portuguese laws.	3,034	658	1,282	2,410
2	No. of Civil Cases under Indian laws.	1,396	1,508	1,085	1,819
3	No. of Criminal Cases under-Portuguese laws.	105	15	69	51
4	No. of Criminal Cases under - Indian laws.	3,263	14,049	12,665	4,647

TABLE No. 8.—WORKING OF THE COURT OF JUDICIAL COMMISSIONER

Serial No.	Nature of the case	Pending at the beginning of April, 1970 (i.e. 1st April 1970)	Institution for the year 1970-71(i.e.1st April 1970 to 31st March, 1971)	Disposals for the year 1970 -71 (i.e. 1st April, 1970 to 31st March 1971).	Pending at the end of March-1971(i.e. 31st March 1971).
	A—Civil				
1	No of cases under Portuguese laws.	2,410	624	647	2,405
2	No. of cases under Indian laws ..	1,819	1,648	1,226	2,257
	Total -A ..	4,229	2,272	1,873	4,662
	B-Criminal				
3	No. of cases under Portuguese-laws.	51	4	31	24
4	No. of cases under Indian laws	4,647	19,592	15,366	8,669
	Total B ..	4,698	19,596	15,397	8,693
	Grand Total A+B ..	8,927	21,868	17,270	13,355

Bar Association

At present the district has one Bar Association and an Advocates Association, with its headquarters located at Panaji and Margao respectively.

Administrative Tribunal

The Administrative Tribunal of Goa, Daman and Diu is a Special judicial body constituted as early as in the year 1918 during the Imperialist Portuguese regime. It appears that the Administrative Tribunal was constituted, as the need was felt for setling diverse types of cases speedily and the difficulties facing ordinary courts of law to cope with increasing number of cases. Prior to the liberation of the territory, the Tribunal was entrusted with the functions dealing with appeals, judgement, consultations, examinations, etc.

After liberation, the Government decided to retain this Tribunal with a revised constitution, and to this effect, the Goa, Daman and Diu Administrative Tribunal Act, 1965, was enacted giving statutory recognisation to this Tribunal.

On the coming into force of the Administrative Tribunal Act, 1965 the Tribunal has retained its jurisdiction exercised before the liberation and subsequently the jurisdiction of this Tribunal has increased under the various new enactments. The Tribunal consists of one Registrar, one Chairman, three non-official members and two official members.

The matters which come for decision before this Tribunal under the two new Acts are as under :—

(1) Evacuee Property Appeals under the Goa, Daman and Diu Administration of Evacuee Property Act, 1964 ;

(2) Eviction Appeals under the Goa, Daman and Diu Buildings (lease, rent and eviction) Control Act, 1968 ;

(3) Motor Vehicles Taxation Appeals under the Goa, Daman and Diu Motor Vehicles Taxation Act, 1965 ;

(4) Compensation Appeals under the Goa, Daman and Diu Municipalities Act, 1968 ;

(5) Tenancy Revision Applications under the Goa, Daman and Diu Agricultural Tenancy Act, 1964 ;

(6) Panchayat Election Disputes under the Goa, Daman and Diu Village Panchayat (Election of Chairman and Vice-Chairman) Rules, 1968 ;

(7) Municipal Election Disputes under the Goa, Daman and Diu Municipalities Act, 1968 ;

(8) Revision Applications under the Daman (Abolition of Proprietorship of Villages) Regulation (Amendment) Act, 1968 ;

(9) Land Revenue Appeals (against the orders passed by the Collector) under the Land Revenue Code, 1968 ;

(10) Land Revenue (2nd Appeal) against the order passed in appeal by the Sub-Divisional Officer under the Land Revenue Code, 1968 ;

(11) Land Revenue (2nd Appeal) against the order passed in appeal by the Director of Settlement and Land Records or Superintendent of Survey Records, under the Land Revenue Code, 1968 ;

(12) Revision Applications under the Goa, Daman and Diu (Abolition of Proprietorship of Land in Diu) Act, 1970.

The contribution of the Tribunal to the Administration is unquestionable since it plays an important role in the field of Administration of Justice. The procedure in this Tribunal is comparatively simpler and more realistic than that of the Court of Law. The Cases are decided more promptly and speedily than those in an ordinary Court of Law. The expenditure incurred by the parties is relatively low, thus ensuring speedy and cheap justice to the common man.

* * *

CHAPTER 13—OTHER DEPARTMENTS

PUBLIC WORKS DEPARTMENT

The Public Works Department was formerly known as 'Direcção das Obras Publicas' but prior to its inception the 'Senado da Cidade de Goa' or 'Camara Municipal de Goa' as it was subsequently known, was entrusted to carry out the functions of public works, besides its own duties, as per the rules governed under the 'Codigo Administrativo' approved by the Decree of 31st December 1836.

Subsequently, various Decrees and Diplomas were promulgated regulating the services of the Public Works Department. By the Decree of 20th August, 1892, a common cadre of public works department of overseas territories known as 'Plano de Organisação dos Serviços de Obras Publicas, Comercio e Industria' was established, later on substituted by the 'Regulamento Geral das Direcções e Inspecções das Obras Publicas das Colonias' (general bye-laws) as approved by Decree dated 11th November, 1911. However, the legislation regarding the 'Regulamento Organico de Direcção das Obras Publicas do Estado de India' was made applicable to this territory by the Decree of 25th August, 1913.

By 'Portaria' No. 654 of 7th August 1920, all the three engineering services of the district *viz.* (i) 'Direcção das Obras Publicas', (ii) Direcção Fiscal de Caminho de Ferro e Porto de Mormugao' and (iii) 'Commissão de Melhoramento de Mormugao' were incorporated in a single cadre, under one Directorate. This was done with a view to unifying all the services of technical nature under a single command. By 'Portaria' No. 1058 of 28th October, 1922, the creation of a subdivision within the Directorate of Public Works Department was felt necessary due to the overgrowing importance of the Mormugao Harbour after the construction of the railway.

Under the Reforms taken place in the 'Carta Organica' approved by Decree No. 12499-A of 4th October, 1926, various services concerning the public works as also hydraulic works, land survey and the national movements in the district, were brought under one department known as 'Direc o de Servicos das Obras Publicas' headed by the Director of Public Works Department. Consequently, the cadre of 'Direcção de Caminho de Ferro e Porto de Mormugao' and that of 'Commiss de Melhoramentos de Mormugao' were separated from this public works department.

With the reorganisation of the cadastral survey by 'Diploma Legislativo' No. 401 dated 10th March 1930, a separate section known as 'Secção de Minas e Industrias' was created and placed under the charge of the Director of Public Works Department. He was responsible for carrying out the exploration of mines, geological survey, industries and industrial statistics with the exclusion of industries which fell under the jurisdiction of the Captain of Ports.

However, a few years prior to Liberation, the whole set up was radically changed and the services of Cadastral Survey and the Industries and Mines were placed under the control of a separate department known as 'Dirccção de Economia', thereby separating these services from the purview of this department.

The district having remained under Portuguese colonial administration for nearly 450 years, no significant progress was made in respect of public works in general.

Prior to Liberation, the department had under its jurisdiction a network of 647 kilometres of roads which joined the main trunk roads connecting the taluka places and important towns, as well as roads leading to the adjoining States of Maharashtra and Karnataka. However, soon after Liberation, the department witnessed a phenomenal growth of public works, not only in providing large scale employment to the available local as well as outside labour, but also contributing towards the socio-economic changes for a better and more progressive life in the district.

For the purpose of better administrative convenience and due to enlarged activities, the department underwent a complete reshuffle and the post of the Director of Public Works Department was converted into that of the Chief Engineer, having under its control five circles with its 20 divisions dealing with various types of public works such as buildings, water supply, national highways, roads, bridges, mechanical and electrical works and the works of local bodies. The Central Public Works Department rules and regulations were gradually extended to this territory.

The immediate task of the department soon after Liberation, was to improve the existing surface of the roads, by providing blacktopped surface and widening the roads as per the traffic conditions. At present, due to the transfer of many Municipal roads, the total length of roads under the Public Works Department has increased from 647 kilometres to 2,100 kilometres. Besides, there exists a large number of village roads measuring about 1,200 kilometres mostly in the form of tracks. Besides improving the existing roads, the department also undertook the work of reconstructing damaged bridges "by the

retreating Portuguese army" totalling to 13 in number, including one major bridge, the Borim bridge, across the Zuari river near Ponda.

The major important works carried out by the department in the field of buildings, roads and bridges, public health engineering, drainage schemes, rural piped water supply schemes, irrigation and hydraulic works and electrical and mechanical works are described below.

Buildings

In this field the department undertakes not only the construction of office buildings, but it also functions as an agency to all other departments to build their different dependencies, quarters and so on. As such, various installations for departments like Electricity, Education Department, Information and Tourism, etc. have been carried out. Besides these works, the department is supervising in technical matters regarding building constructions of municipalities, Block Development Offices and other local bodies like Comunidades, temples, etc. It also undertakes the valuation certificate for the Collector's Office, technical sanctions for projects on which Government loan is sanctioned, and sanctioning technical projects for Housing Board.

Roads and Bridges

Roads in the district have been classified into national highway, west coast road, state highways, major district roads and other roads, covering a total mileage of approximately 3,685 kilometres. Besides, the construction of the major Jawaharlal Nehru Bridge, there are 39 bridges of various sizes, important among them being the Usgao Bridge, Candeapar bridge and Cumbarjua bridge. The work pertaining to the Zuari bridge across the Zuari river is under progress and after completion will provide a link on the national highway along with the Jawaharlal Nehru Bridge.

Public Health Engineering

In this field, the department is entrusted with water supply schemes for drinking purposes. Prior to Liberation only the main towns of Panari, Margao, Ponda and Vasco-da-Gama and villages en route were supplied with water from the Opa plant, which had a limited capacity of 1·76 mgd. However, with the increase in developmental activities soon after Liberation, the capacity of the water treatment plant at Opa was augmented by another 2·5 mgd, bringing the total capacity of the plant to 4·26 mgd. Subsequently, due to the bulk demand of water viz. 5 mgd. from Messrs Zuari Agro Chemicals Ltd., for its factory at Sancoale and due to the demand of increased population and the expansion of industrial and naval and military establishments,

a 12 mgd. scheme was approved by the Government of India at an estimated cost of Rs. 264·08 lakhs. The work of this scheme has already been completed.

The commissioning of the scheme has benefitted a major population of southern Goa, and also industries and Mormugao Port. The following works have also been completed and commissioned under the *Urban Water Supply Schemes* :—

(*i*) Additional capacity (2·5 mgd) of Water Treatment Plant, at Opa.

(ii) Construction and laying of C.I. gravity mains from Opa to Curti.

(*iii*) Water works schemes for Mapusa, Bicholim, Tivim and Assonora.

(*iv*) Construction of an overflow wind in the Candeapar river.

(*v*) Extension of the distribution system to Medical College campus at Bambolim and Engineering College at Farmagudi, Ponda and other extensions.

(*vi*) Providing and lying of C.I. gravity mains from Curti to Ambora to Margao to Vasco-da-Gama.

Drainage Schemes

Under this scheme the sewage treatment plant and sewerage scheme for Panaji town and house connections to sewers in the city have been completed benefitting approximately 30,000 inhabitants. Besides these works, of the nine rural water supply schemes, four are presently under execution and the remainining are in the tendering stage.

Irrigation and Hydraulic works

In this field the department looks after the Soil Conservation Schemes, involving construction and repairs of bunds for prevention of inundation of fields in low-lying areas. Similarly construction and repairs of works like tanks, *bandharas*, ports and waterways are also carried out. The ports of Talpona and Chapora are also to be developed to provide facilities for fishing, sailing vessels, etc. Jetties and ramps are also constructed and maintained by the department. The department has so far spent an amount of Rs. 27·56 lakhs in various hydraulic works.

Electrical and Mechanical Works

This division of the department maintains plants and equipment of roads and buildings as also any other required for civil engineering works and purchases of various machinery. It has a workshop dealing with carpentry, smity and other allied crafts. It also maintains a garage and looks after the maintenance and repairs of various government vehicles.

DIRECTORATE OF AGRICULTURE

During the erstwhile regime agriculture did not receive much attention. All the publicity work and other activities related to agriculture were carried out under 'Repartição de Fomento' and subsequently under 'Repartição de Agricultura e Veterinaria da Direcção dos Serviços da Economia' until Liberation. After Liberation, it was realised that the set up of this department was inadequate to meet the growing needs of the agriculturists of the district, and in order to pay more attention towards the implementation of developmental schemes of agriculture, the Agriculture Department came into existence in 1965.

In October 1967, three Divisional Offices at Panaji, Margao and Mapusa were divided into five zones, establishing 5 Zonal Agricultural Offices with their headquarters at Mapusa, Bicholim, Ponda, Margao and Curchorem, and appointing Zonal Agricultural Officers, one at each Zonal headquarter. Three departmental farms at Ella, Carai and Durgavado were placed under the direct supervision of three Farm Superintendents. Besides this, there is one Mechanical Cultivation Section attached to this Directorate, which is looked after by a Mechanical Cultivation Officer.

There is one Agri-Horticultural-Research Station and one Extension Training Centre, both located at Ella near Old Goa. The Agri-Horticultural Research Station at Ella was established in March 1965, while the Extension Training Centre was established in December 1964, by amalgamating the Agricultural School at Pileme and the Rural Welfare Centre at Guirim. A Farmer's Training Centre was established in the year 1971 under a Centrally Sponsored Scheme and placed under the charge of the District Training Officer with a view to educating farmers in modern farming techniques, adopted from time to time.

At present there are five Government Farms located at (i) Duler (Mapusa); (ii) Margao; (iii) Chimbel; (iv) Durgavado and (v) Carai. The first two were established during the Portuguese regime i.e. Duler in 1960 and Margao in 1951, while the remaining farms were established during the post Liberation period i.e. Durgavado in 1964, Carai in 1965 and Chimbel in 1966.

The department is headed by the Director of Agriculture who also functions as the ex-officio Deputy Secretary to the Government with headquarters at Panaji. He is assisted by three Deputy Directors and seven Zonal Agricultural Officers, each in charge of a zone.

The main activities of the Department are to frame and implement the agricultural developmental schemes with a view to achieving the

goal of self-sufficiency in case of food grains, fruit crops, vegetable crops, etc. by increasing the production and by bringing new areas under plough and to developing the agricultural industry in the district on a sound footing in the shortest possible time.

Since 1963, the following main schemes have been implemented by the Department :—

(1) Improved Seed Programme.
(2) Manures and Fertilizers.
(3) Plant Protection.
(4) Agricultural Machinery and Implements.
(5) Horticulture Development.
(6) Agri-Horticultural Research (Station).
(7) Extension Training Programme Centre.
(8) Land Development and Utilization of Cultivable wastelands.
(9) Agricultural Exhibition and shows.
(10) Agricultural Education.
(11) Agricultural Statistics.
(12) Intensive Cultivation Programme (H.Y.P.).
(13) Soil Conservation.

Besides these schemes, various centrally-sponsored schemes such as Farming Training Centres, National Demonstration, Pilot Project and Multiple Cropping, and Banana Development have also been implemented.

Improved Seed Programme

Improved and high yielding variety of seeds of different crops are supplied to farmers, in order to increase the per acre yield of various crops that are grown in the district. Since the introduction of the High Yielding Variety Programme during the kharif season of 1966, the area under this programme has increased considerably and the present area under this crop is 23,077 hectares. Similarly, the area under sugarcane cultivation has increased from 70 hectares in 1960-61 to 1,300 hectares in 1975-76.

About 40 to 50 per cent of seed requirements of paddy and sugarcane crops and most of improved varieties of vegetables seed are met from the produce from the Government farms. The remaining seed requirements are met by procuring seed from National Seed Corporation and mutual exchange among the farmers.

Plant Protection

Plant protection chemicals are suppied to farmers at subsidized rates of 25 per cent. During earlier years pesticides and fungicides were supplied to the farmers at subsidized rates ranging from 100 per cent to 50 per cent. Similarly for demonstration purposes, plant protection appliances are supplied free to cultivators with a view to putting a timely check on the attack of pests and diseases on different crops. Farmers can own dusters, sprayers, etc. by availing the subsidy of 25 per cent of the cost price.

Manures and Fertilizers

Different types of fertilizers are made available to the cultivators by purchasing and selling through co-operative societies and licenced dealers. The consumption of fertilizers which was very low soon after Liberation, suddenly increased to 3,830 tonnes in 1963-64, and witnessed a further increase of 8,340 tonnes in 1972-73, and it is expected that the fertilizer consumption will reach 10,000 tonnes by the end of 1973-74. Under this programme, compost is also prepared on scientific lines for which technical guidance is given. Green manuring seeds of Dhaicha and Hyricidea cuttings are also supplied to farmers. Under the demonstration programme, various demonstrations like multi-crop demonstration, national demonstration, rural compost demonstration, etc. are being conducted.

Agricultural Machinery and Implements

Departmental tractors and bulldozers are supplied to cultivators for agricultural operations like ploughing, levelling etc. for which normal hire charges are collected from them. During the year 1972-73 there were 52 tractors, 14 bulldozers and 22 power tillers in use, and the number of hours of work put in by all these machineries during 1972-73 was 25,682 hours, ploughing 5,005 hectares of land.

Horticultural Development

Imputed fruit seedlings and grafts of different fruit crops like coconut, cashewnut, mango, chickoo, guava, pineapple, papaya, banana, etc. are supplied to fruit growers. Besides quality material together with the credit facilities are also made available.

Agri-Horti Research Station

Various trials on varieties of crops such as paddy, maize, groundnut, tapioca, banana, pineapple, etc. were conducted on the farm at Ella during the year 1969-70. An analysis was undertaken of 700 soil samples collected for the purpose and the required fertilizer dose for each was recommended. During the year 1972-73, 3,137 soil samples have been analysed and fertilizer recommendations given.

Extension Training Centre

The extension training centre at Ella conducts various courses where *gramsevaks*, *gramsevikas* and secretaries of the village panchayats, Associate Women workers and teachers attached to the Plant Nutrition Programme, are given training in different fields of agriculture. Twenty *gramsevikas* successfully completed the two year course in 1969-70. A three months training course was also conducted, the benefit of which was taken by 80 panchayat secretaries. Besides upto 1972-73, 49 associate women workers have also been imparted one month training course.

Agricultural Exhibitions and Shows

Agricultural exhibitions and shows, crop competitions, national plot trials on soils etc. are conducted by the department with a view to educating the farmers about the improved agricultural practices.

During the year 1972-73, an agricultural fair was held in Panaji depicting different agricultural programmes implemented by the Government. Films of agricultural interest were screened in different villages. The district was also represented in the Fifth National Agricultural Fair held at Bombay promoted by Bharat Krishak Samaj. Besides, advertisement on agricultural programmes are also issued in local dailies and souvenirs are brought out from time to time.

Agricultural Statistics

The statistical wing of the Directorate of Agriculture is responsible for agricultural statistics. Annually two crop estimation surveys on paddy are conducted during the kharif and rabi seasons. For the last 2 years this survey has also been extended to Ragi (nachini) crops.

Intensive Cultivation Programme

High Yielding Variety Programme: Paddy being the main staple food crop of the district, high yielding varieties of paddy like T.N. 1, IR. 8, Padma, Jaya ADT-27, Annapurna, etc. have been introduced in this district since the kharif season of 1966.

Yearwise target and achievements under High Yielding Varieties of Paddy programmes since 1966 is as under :—

Paddy—Area under Kharif season :	...	39,896 hectares
Area under Rabi season :	...	6,069 hectares
Total	...	45,965 hectares

The following table gives the year-wise targets and achievements on High Yielding Varieties of Paddy from 1970-71 to 1975-76 :—

TABLE No. 1.—YEARWISE TARGETS AND ACHIEVEMENTS OF HIGH-YIELDING VARIETIES

Year	Season	Target in Hectares	Achievements in hectares	Distribution of seed in m. tons
1970-71 ..	Kharif ..	8,000	5,658.5	1,69,755
	Rabi ..	5,000	5,348.6	1,60,458
	Total ..	13,000	11,007.1	3,30,213
1971-72 ..	Kharif ..	9,000	8,200.0	2,46,000
	Rabi ..	5,000	5,000.0	1,50,000
	Total ..	14,000	13,200.0	3,96,000
1972-73 ..	Kharif ..	13,000	9,396.0	2,50,000
	Rabi ..	6,000	5,308.0	1,50,000
	Total ..	19,000	14,704.0	4,00,000
1973-74 ..	Kharif ..	14,000	13,535.0	6,76,000
	Rabi ..	6,000	7,385.0	3,69,000
	Total ..	20,000	20,920.0	10,45,000
1974-75 ..	Kharif ..	14,500	13,743.0	6,87,000
	Rabi ..	6,500	8,442.0	4,22,000
	Total ..	21,000	22,185.0	11,09,000
1975-76 ..	Kharif ..	15,000	14,173.0	7,08,000
	Rabi ..	7,000	8,904.0	4,45,000
	Total ..	22,000	23,077.0	11,53,000

Soil Conservation

The Directorate of Agriculture is also concerned with soil conservation. River embankment in the district protects about 18,000 hectares of rich cultivable alluvial flats along the margins of the rivers from being inundated due to the brackish tidal water.

From 1962-63 till 1975-76 a length of about 310 kilometres of bunds have been repaired by Government. The cost of these repairs amounted to Rs. 79,91,000.00. This has protected about 32,000 hectares of khazan land to ensure the production of about 26,000 tons of paddy. From 1973 onwards a new item i.e. terracing of land under land development based on the pattern of assistance followed by Maharashtra Government has been introduced under which a subsidy of 62½ per cent towards the normal higher charges of bulldozers has been granted, and a target of 1,000 hectares has been fixed for coverage by the end of this year.

Loans and Subsidy

To aid the farmers financially, loans are granted under Land Improvement Loans Rules, 1966 and Agriculturists Loan Rules, 1966 for reclamation of land, irrigation, purchase of pumping sets and for fertilizers, etc.

Subsidies are also granted for the improvement of *morod* lands for the purchase of soil conditioners, for increasing local manurial resources as also for other development programmes.

The following are the figures regarding loans granted from 1965-66 to 1975-76 :—

			Rs.
1965-66	...	...	7,05,000·00
1966-67	...	...	5,22,668·00
1967-68	...	...	7,99,967·00
1968-69	...	...	6,73,300·00
1969-70	...	...	1,28,270·00
1970-71	...	...	2,83,105·00
1971-72	...	...	3,74,033·00
1972-73	...	...	2,30,639·00
1973-74	...	...	9,35,000·00
1974-75	...	...	7,72,000·00
1975-76	...	...	5,10,000·00

ANIMAL HUSBANDRY DEPARTMENT

During the Portuguese regime, prior to Liberation in 1961, the Animal Husbandry and Veterinary Services comprised only a sector of the Development Department, confining its activities to a small cattle farm at Dhat, with an imported herd of Sindhi cows, a small poultry farm at Tonca, and animal health was attended to by only two Veterinary officers and about half a dozen stockmen.

There were no regular veterinary dispensaries as such, and the work performed was restricted to the vaccination of dogs against rabies and poultry against prevailing epizootics. There were no development schemes concerning animal husbandary, veterinary services and dairy development.

As a first step therefore, in a planned economy, a separate Directorate of Animal Husbandry and Veterinary Services was established in October 1962. Simultaneously, with this development, the Community Development Blocks were established in the talukas and in each of which was also the Extension Officer for Animal Husbandry.

The department of Animal Husbandry and Veterinary Services is headed by the Director of Animal Husbandary and Veterinary Services. He is principally assisted by three Deputy Directors and other necessary technical and non-technical, ministerial and other staff. The total strength of the staff in the year 1975-76 was approximately 315.

Functions

The principal functions of the department are to conduct veterinary dispensaries and first aid centres and to look after healthier animal growth in the territory. Poultry development and dairy development besides cattle and pig-development also come under the purview of the department.

The department has set up veterinary dispensaries and first aid centres in all the talukas of the district. The following statement indicates the work carried out by the veterinary dispensaries from 1973-74 to 1975-76 :—

	1973-74	1974-75	1975-76
Number of Veterinary dispensaries ..	13	13	13
Number of Innoculations performed..	1,56,597	2,20,955	2,27,709
Number of Castrations performed ..	461	329	670
Analysis and Examinations performed	90	98	353
Total number of cases treated ..	69,387	84,878	87,341
(*a*) Contagious	4,299	6,323	3,465
(*b*) Non-Contagious	65,088	78,555	83,876

For cattle development, under the Premium Bull Scheme undertaken to upgrade the local non-descript bovine population, bulls of superior quality such as Sindhi, Sirti and Murrah were purchased and located it a suitable place.

The following statement shows the number of bulls/buffaloes allotted to custodians in the district under the Premium Bull Scheme :

Breed	Number of Custodians year-wise										
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Murrah buffalo ..	8	1	18	1	1	2	3	6	5	4	7
Red Sindhi Bull .	3	2	3	..	..	..	..	2	..	1	1
Sirti ..	..	..	..	..	..	..	..	..	..	1	4
Total	11	3	21	1	1	2	3	8	5	6	12

The existing livestock farm at Dhat was expanded during the year 1968-69 by the addition of eight Murrah buffaloes. The farm has a cultivation section where various types of fodder crops and nutritive grass are cultivated both for the supply of fodder to the farm itself and seed material for distribution to farmers. Bull-calves were reared for distribution. Besides preparing sileage and hay, the farm serves as a Demonstration Centre for the scientific management and breeding practices.

The following statement gives the idea about the working of the livestock farm at Dhat during the year 1972-73 :

1. *Milk production and disposal*

(*a*) Total production of milk	... ...	1,40,286·00 litres
(*b*) Milk to Ponda dairy	... ...	65,298·00 litres
(*c*) Milk sold on coupons	... ...	23,611·00 litres
(*d*) Handling loss	... ...	252·00 litres
(*e*) Transit loss	... ...	437·00 litres
(*f*) Milk Receipt M.F.A.L. from Ponda dairy		756·50 litres

2. *Position of the herd as on the last day of the year 1972-73.*

(*a*) Cows in milch	... ...	23
(*b*) Dry cows	... ...	26
(*c*) Y.S. male	... ...	17
(*d*) Y.S. female	... ...	48
(*e*) Calves male	... ...	28
(*f*) Calves female	... ...	15
(*g*) Bulls	... ...	16
(*h*) Bullocks	... ...	4
(*i*) Buff in milch	... ...	59
(*j*) Dry Buff	... ...	64
(*k*) Y.S. male	... ...	42
(*l*) Y.S. female	... ...	97
(*m*) Calves male	... ...	13
(*n*) Calves female	... ...	10
(*o*) Bulls	... ...	5
	Total ...	467

3. *Births*	...	...	113
4. *Deaths*	...	...	85
5. *Transferred to Societies*	...	...	4 Murrah Bulls,
6. *Transferred from Key Village Scheme, Ponda.*			2 Murrah Bulls, 1 Sindhi Bull, 1 Buffalo (Murrah), 1 Murrah Calf
	Total	...	5
7. *Given to Societies*	...	...	11
8. *Transferred to Curti, Ponda*		...	3
9. *Eaten by tiger*	...	...	1
10. *Sold by public auction*	...	...	92
11. *Contagious diseases*	...	...	Nil
12. *Meat inspections*	...	...	Nil
13. *Green Fodder—*			
(*a*) Maize	...	...	1,07,693 kgs.
(*b*) Gajraj	...	...	10,79,169 kgs.
(*c*) Paragrass	...	...	3,08,878 kgs.
(*d*) Total	...	...	1,48,340 kgs.
(e) MFAL	...	...	2,600 kgs.

14. *Feed fed to Cattle—*

(*a*) Mysore mash	(*i*) Opening Balance	Nil
	(*ii*) Receipts ...	1,39,610 kgs.
	(*iii*) Issues ...	1,35,301 kgs.
	(*iv*) C.I. Balance ...	4,309 kgs.
(*b*) Curti Feed	(*i*) Opening Balance ...	7,372 kgs.
	(*ii*) Receipts ...	1,90,637 kgs.
	(*iii*) Issues ...	1,97,532 kgs.
	(*iv*) C.I. Balance ...	677 kgs.
(*c*) Hindi Lever (MFAL)	(*i*) Opening Balance	Nil
	(*ii*) Receipts ...	2,925 kgs.
	(*iii*) Issues ...	1,980 kgs.
	(*iv*) C.I. Balance ...	945 kgs.

The Key Village Scheme was started on September 25, 1968, with the object of taking up intensive cattle development in a restricted block and it comprised breeding by artificial insemination and natural service, feeding, management, disease control, mass castration of scrub-bulls, etc. Two centres, one at Bicholim-Satari and the other at Ponda were established under this scheme during 1967-68 and 1970-71 respectively.

To ensure continuous supply of balanced feed at economic prices, a feed mixing plant having a capacity of four tons per day was commissioned to supply farmers with livestock feed at reasonable prices.

Poultry Development Schemes

Expansion of poultry farm and modernisation.—The first step to meet the heavy demand for superior stock was to expand the small existing poultry farm at Ella at Old Goa. This has been expanded to maintain 6,000 layers and also meet the requirements of quality chicks of the local farmers. Hybrid white or Austro white chicks of pure breed are now being supplied. The daily average production of eggs is approximately 3,800.

The Intensive Poultry Development and other Programmes.—The intensive poultry development blocks are now beginning to improve in their general management. A state level Marketing Organisation has been set up for the collection and distribution of eggs and poultry birds to the consumers. Similarly two Poultry Blocks at Ponda and Canacona have also been set up under the Applied Nutrition Programme.

Pig Development

A pig breeding station was established at Curti (Ponda) where they are housed under hygienic conditions. The piglings bred at the Farm are distributed to farmers to popularise exotic breed of pigs. During the year 1974-75, the total strength of the Farm consisted of 2 boars, 14 sows and 28 piglings. So far, the Farm supplied 76 piglings and is expected to achieve a target of 150 piglings during the year. In order to provide remunerative market, it is proposed to set up a Pork Processing Unit having a capacity of 10 pigs per day.

Training and Education

With a view to facilitating the progress of various development schemes, provision has been made for training the necessary staff in different fields of Animal Husbandary.

Dairy Development

After Liberation, imports of milk and milk products were restricted. However, keeping in view the rapidly increasing demand for these products by the urban population, dairy development schemes were started in 1963-64, supported by Cattle Development Schemes. The following schemes are implemented by the Department :

1. Organisation of Dairy Co-operative Societies in potentially milk producing areas.

The following table shows the number of dairy co-operative societies established since 1963-64 to 1972-73 :—

TABLE No. 2.—TALUKA-WISE FORMATION OF DAIRY CO-OPERATIVES

Taluka	Formation of Dairy Co-operatives									
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Bicholim ..	2	..	..	3	..	3	..	..	2	..
Satari ..	..	..	..	6	1	2	..	2	..	2
Tiswadi ..	1	5	2	..	..	..	..	..	..	..
Mapusa ..	..	..	..	3	..	3	..	1	2	..
Ponda ..	..	4	..	..	2	4	2	2	2	3
Sanguem ..	..	2	..	..	.	2	..	2	..	1
Salcete ..	..	1	..	..	..	..	..	..	..	..
Canacona ..	..	1	..	..	..	..	..	..	..	..
Quepem ..	..	..	..	..	..	..	..	1	..	..

2. *Financial Assistance to dairy societies.*—The financial assistance to dairy societies was extended in the form of loans, managerial subsidy, subsidy for the purchase of milk and handling equipments, etc.

The following table gives the particulars of such advances as also the particulars about share capital collected from 1963-64 to 1973-74.

TABLE No. 3.—DETAILS OF ADVANCES AND SHARE CAPITAL OF DAIRY CO-OPERATIVES

Year	Loan		Share capital		Managerial Subsidy		Equipment subsidy	
	No of Societies	Amount	No. of Societies	Amount	No. of societies	Amount	No. of societies	Amount
		Rs.		Rs.		Rs		Rs.
1963-64	5	47,000 00	.		.		..	....
1964-65	9	1,11,000·00	...	..	.	...	...	...
1965-66	9	1,42,000·00	12	23,500 00	. .	.	...	...
1966-67	14	2,10,700 00	9	16,000 00	10	12,000·00	..	....
1967-68	14	1,60,000·00	13	31,940·00	21	18,900 00	17	34,000·00
1968-69	26	5,09,900·00	22	44,125 00	10	6,600 00	15	30,000 00
1969-70	25	3,62,300 00	22	35,411·00	22	14,400·00	2	4,000·00
1970-71	43	6,82,000·00	23	28,499·00	21	13,500·00	1	2,000·00
1971-72 ..	23	4,60,000·00	17	29,260 00	6	2,700·00	14	28,000·00
1972-73	....	....	16	99,000·00	9	6,600·00	4	8,000·00
1973-74	16	3,10,000·00	1	1,590·00	6	3,600·00	. .	....

3. *Establishment of Pilot Pasteurisation Plant.*—This plant has been established in 1964 and has a capacity of 2,000 litres. Previously, only bottling milk and distributing work was done. Later on, a pasteurisation plant was purchased and set up at Panaji as the demand has increased. However, a new site has been acquired at Curti-Ponda and a 10,000 litre milk capacity plant was set up in October 1971. It supplies milk to the towns of Panaji, Mapusa, Vasco-da-Gama, Ponda

and Bicholim. During the year 1975-76 the plant handled about 7,500 litres.

4. *Rural Dairy Extension Service.*—This service forms a key for Dairy Development and it was introduced in 1966-67. The individual members of societies were assisted through this programme.

The extension programme is supported by technical staff to render technical advice on clean milk production, quality control, management of cattle marketing facilities, technical advice in conservation and propagation of forage crops. The Animal Husbandry Schemes are also linked with this programme.

DIRECTORATE OF INDUSTRIES AND MINES

During the Portuguese rule, no large scale industry existed except that of mining where ore was extracted only for export purposes. What could be termed, if it can be said so, as an industrial complex then, consisted of a few cashew processing units, saw mills, a large number of rice and flour mills, a carbon dioxide factory, a tyre retreading unit, etc. The economy was mainly agro-economy and agro-based industries were conspicuous by their absence. The industrial base was weak, characterised as it was by limited markets, free imports, lack of cheap motive power, absence of technical know-how, high wage rates, etc.

With mining as the only predominant industry in the area, in the erstwhile colonial Portuguese regime there was no separate department for industries and the work regarding industries was looked after by the department known as 'Direccao de Economia', which also was entrusted with various other subjects such as agriculture, animal husbandry, birds, etc. In view of preponderance given to each sector of economy after the liberation of the territory, the Director of Economic Services was redesignated as the Director of Industries, Mines and Land Survey in July 1963. However, subsequently, the work of land survey was separated and then in July 1965 came into existence the Directorate of Industries and Mines as the urgent need was felt for the industrialisation of the territory. The department is headed by the Director of Industries and Mines.

During the ex-regime, the progress of industrialisation, as has been stated already, was almost at a snail's pace. After Liberation, in the large scale sector, Messrs. Zuari Agro Chemicals, a fertilizer complex was established at Sancoale with an approximate investment of about Rs. 50 crores. One textile mill and a brewery plant have also gone into production along with a steel re-rolling mill functioning since 1967-68. In pelletisation plant, another important large scale industry has developed that exports pellets made out of iron fines.

The development of small scale industries is to be achieved in two ways, by intensification and by diversification of industrial base. Under the programme of intensification, the number of units engaged in the existing type of industries are to be enlarged. The following statement gives the progress achieved in December 1973 over 1961 in respect of a few selected industries :

Industry	No. of units	
	1961	1973
Automobile	23	61
Tyre retreading	1	18
Washing soap	5	12
Sheet metal works	3	80
Mosaic tiles	1	20
Fruit and Fish canning	2	11
Wood working	3	86
Printing presses	31	67

Under the programme of diversification, it is envisaged to expand the scope of industrial base with the establishment of industrial units, the type of which are not in existence such as the manufacture of storage batteries, spectacle frames, carbon papers, sanitary towels, drugs and chemicals, cosmetics, paints and varnishes, stoves and pilfer proof caps, etc.

Certain schemes for providing incentives such as power subsidy to industrial units, managerial subsidy, subsidy on improved type of tools and rebate on sales of handloom products by handloom co-operatives have also been implemented. Financial assistance by way of loans on easy terms is also made available by the Directorate.

The following statement throws some light on the progress of the small scale industries in the district :—

Year	No. of units	Cumulative Total
1965	37	48
1966	44	92
1967	70	162
1968	55	217
1969	84	301
1970	78	379
1971	126	505
1972	91	596
1973	114	710
1974	93	803
1975 (March)	19	22

The small scale industrial units in the district have also started exporting the manufactured goods. The following statement gives the value of exports by these units from 1965-66 to 1975-76 :—

Year	*Value of exports* (Rs. in lakhs)
1965-66	2·55
1966-67	6·89
1967-68	17·55
1968-69	22·51
1969-70	13·84
1970-71	41·58
1971-72	42·92
1972-73	57·76
1973-74	201·97
1974-75	82·66
1975-76	201·91

The Directorate of Industries and Mines and also Small Industries Service Institute, Margao, have conducted courses to train persons in different lines of industrial activities Training courses have thus been organised in carpentry, pottery, footwear, machine shop practice, welding, electroplating, blue print reading, casting, business management services, etc.

The office of the Small Industries Service Institute also assists the parties by giving them technical advice, providing economic information, etc.

The concept of industrial estates and industrial areas is new to the district. Through the funds placed at the disposal of the Industries Department, a Goa, Daman and Diu Industrial Development Corporation has been set up and it is charged with the responsibility of establishing industrial estates and areas. Three industrial estates have already been set up at Corlim, S. Jose de Areal and Sancoale. In the industrial estate at Corlim as many as 15 units are engaged in industrial activities. In the industrial estate at S. Jose de Areal the sheds have already been allotted and at the industrial estate at Sancoale, the sheds have recently been completed.

It has been estimated that in the small scale industries there is fixed capital investment to the tune of Rs. 3 crores providing employment to over 6,250 persons and the value of the production is estimated to be over Rs. 3·5 crores. These industries are mainly concentrated at Margao, Panaji, Ponda, Curchorem and Bicholim.

The Maharashtra Small Scale Industrial Development Corporation provides assistance for the development of small scale industries in the district by supplying and distributing various raw materials.

The Maharashtra State Financial Corporation in which the Government of Goa, Daman and Diu are also a shareholder have extended their activities to the district since 1964.

Handicrafts Emporium, Tourist Hostel, Panaji

With a view to promoting the handicrafts industry in the district, the Government has set up the Handicrafts Emporium, which is located in the Tourist Hostel premises at Panaji. Tourists being the chief patrons of handicrafts, the Emporium is ideally located in the Tourist Hostel. It serves as a sale outlet for handicrafts produced in the district and handicrafts from the rest of the country are also being displayed for sale in the emporium.

The financial and administrative control of the same is vested in the Director of Industries and Mines. The purchases for the Emporium are made by a Sub-Committee specially constituted for the purpose.

The Directorate of Industries also participated in the Fifth National Agriculture Fair held at Bombay in 1969 where were displayed the handicraft products of the territory. It also participated in the First Goa Agriculture Fair held at Campal, Panaji, from 19th December 1969, where handicrafts, mineral samples, industrial products, etc. were exhibited.

Small Industries Project

Besides all the activities of the Directorate mentioned earlier, another important activity of the Directorate covers the Rural Industries Project.

The Rural Industries Project was first discussed by the Planning Commission in August 1961 with a view to maintaining a balance between employment on one side and efficiency on the other and preserving and nurturing these social values such as economic self-Government, minimising economic exploitation, promoting economic and social equality and preserving and developing producer's personality. Its ultimate aim was to convert the present lopsided and purely agricultural communities into balanced agro-industrial communities. It was to be achieved through all-round development of agriculture, irrigation, communications, industries, particularly agro-based industries, social services and other economic pursuits.

The district of Goa was selected as one of the Rural Industries Project area in 1963 and the activities of the same commenced in the year 1963-64. Initially the Rural Industries Project Office was under

the control of the Director of Industries and Mines upto the time it was separated from the Directorate and was brought under the control of the Project Officer who was delegated the powers of the head of office and as the disbursing Officer on October 27, 1964. The Rural Industries Project was again brought under the control of the Director of Industries and Mines in 1967-68.

The survey of the project area was carried out by the project staff itself in the month of August-September 1964. A State Level Project Advisory Committee was appointed on June 10, 1964 for the project to guide the development of Industries in rural areas and small towns and to prepare and approve programmes for implementation in Goa Project area. The Project staff consists of one Planning Officer, one Economic Investigator, four instructors, one assistant instructor and the necessary ministerial and other staff.

The activities of the Project cover diffferent aspects such as training programme, production centres, common facility centres and financial assistance in the form of loans to small scale and cottage industries.

At present, the following schemes are operating under the Project :

1. Carpentry Production and Common Facility Centre, Poinguinim—Under this scheme production of wooden furniture is undertaken and the services of the machinery installed are also made available to local carpenters at nominal charges.

2. Carpentry Common Facility-*cum*-Production Centre, Verem—At this centre, manufacture of wooden furniture with carving as well as fine ivory works is undertaken.

3. Common Facility Centres have been established at Advoi and Maem (potteries) at Siroda (bamboo works) and S. Jose de Areal (quarry works).

In these facility centres, facilities of common workshop and equipment are made available to the interested persons, under the guidance of skilled instructors. Out of the above defined facility centres, the centres at Siroda and S. Jose de Areal have been discontinued of late.

Financial assistance is given to the needy artisans and small scale units for establishment of industries, working capital for purchase of machinery, etc. The industries which have been provided assistance include tiles and brick manufacturing units, saw mills, workshop, soft drink units, bakeries, tyre retreading, rice and flour mills, plastic bag manufacturing unit, etc. from 1963-64 to 1972-73, an amount of Rs. 9,69,930·00 has been disbursed to 206 units. Loans under the State Aid to Industries Act, are also granted under the Project on liberal terms.

Mines

So far has been dealt the industrial aspect of the department. In what follows is described in brief the work of the department in respect of mining activities in the district.

After the commencement of the mining industry in the district in 1905, need was felt to organise the respective services regarding mining. On April 18, 1906, the then Director of Land Survey was given an additional charge as the Mining Engineer. The Portuguese Colonial Mining Laws came to be enforced by the Decree dated September 20, 1906. The administrative service in connection with the mining activity was centralised by the General Administration Department and a separate Mining Section was established on December 17, 1907, to look after this work. Subsequently, the Mining Section was separated from the General Administration Department and was attached to the Land Survey Department. The Director of Public Works Department was appointed as the head of the Mining Section. Later on, on November 2, 1935, the Mining Section came to be attached to the Public Works Department and it continued to be so till the creation of the Directorate of Economic Services in July 1957 of which the Land Survey Department and the Department of Mines became the wings. However, the Land Survey Department, the Mines Department and the Industries Department functioned under the Public Works Department upto the end of the year 1958.

The Department of Mines was created to look after the sub-soil and its resources in mineral ore of any type, the quarrying of mineral ore and the execution of the Mining Legislation.

Under Notification dated September 17, 1962, the Director of Economic Services was *inter alia* delegated with the following powers :—

(1) Collecting mining taxes under Portuguese Colonial Mining Laws.

(2) Granting licences for quarrying, construction, rubber and stones subject to the approval of the Port Officer in case the quarrying was done within any Port area.

(3) Ordering refund of deposits for mining concessions and land grants.

(4) Issuing certificates of inspection of mines.

(5) Signing visit books of mines.

(6) Approving the selection of the members of the Committee entrusted with the survey of the mining area demarcated for exploration of a mine.

Under Gazette Notification, dated September 30, 1963, the provision of the Mines Act, 1952, the Mines and Minerals (Regulations and Development) Act, 1957, the Mineral Concession Rules, 1960, and the Mines Rules, 1955, as modified by the Goa, Daman and Diu (Laws) Regulations, 1962, came into force in the district with effect from October 1, 1969. However, under the same notification it was declared that Section 16 of the Mines and Minerals (Regulation and Development) Act, 1957, was not at that time applicable to this district. This Section 16 was later on extended to the district with effect from January 13, 1966.

The provisions of the Mines Act 1952 are enforced by the Directorate General of Mines Safety, Government of India. The Mines Act 1952 provides to amend and consolidate the law relating to the regulations of labour and safety in mines. So, after October 1, 1963, the Mines Department which was hitherto also concerned with the enforcement of the provisions for safety and health of workmen employed in mines, was left with the following functions :--

(1) grant of concessions under Mineral Concession Rules, 1960 ,

(2) collection of mining taxes including royalty in mineral ore ;

(3) issue of Essentiality Certificate for the import of mining machinery ;

(4) authorization for sale/transport/export of mineral ore ;

(5) issues of licences for storage of explosives ;[1]

(.) enforcement of those provisions of the Portuguese Colonial Mining Laws, which were not covered by the Mines Act, 1952 and the Mines and Minerals (Regulations and Development) Act 1957 ;

(7) grant of licences for quarrying stones in Government land ;

(8) collection of statistics on production of mineral ore in different mines in this territory ;

(9) to provide necessary information to this Government on the matters connected with mines and minerals in this territory ;

(10) to attend to public inquiries relating to mines and minerals.

Work done by the Department

It may be pointed out that the mining industry in the district has developed under the control and guidance of the Mines Department. Even though prospecting of iron ore and manganese was started in the district as early as in 1905, it was only in the year 1941 that a sample consignment of 1,000 tons of iron ore was made to Belgium. Regular export of iron ore was started only in the year 1947 and most of the

[1] Licences for explosives were issued by police authorities only after Liberation (19th December 1961). The same were issued by the Mining Department upto 31st March 1967, and since 1st April 1967, the same is issued in the Inspectorate of Explosives, Nagpur or by the local Collectorate.

iron ore was exported to Japan. The speedy development of mining industry in the district was also due to the grant of concessions and due to low taxation on minerals and also nominal import duty on mining machinery. The following statement shows the number of mining concessions granted year wise from 1929 to 1972 :--

Year	*No of concessions granted*
1929	1
1931	1
1937	2
1941	17
1942	1
1947	1
1949	18
1950	42
1951	71
1952	103
1953	144
1954	49
1955	42
1956	50
1957	63
1958	76
1959	85
1960	26
1961	8
1963	6
1964	1
1966	2
1967	2
1968	9
1969	13
1970	16
1971	7
1972	4

Under the Mines and Minerals (Regulations and Development) Act, 1957, the following have been granted by the end of March 1973 :—

Certificate of approval	240
Prospecting licences	29
Mining leases	89

The following statement gives the trend of mineral production in the district from 1965 to 1975 :—

Year	Iron Ore	Manganese Ore	Ferro-Manganese Ore
1965	65,84,061 tons	33,286 tons	77,236 tons
1966	67,18,000 tons	22,000 tons	67,000 tons
1967	67,51,000 tons	18,000 tons	24,000 tons
1968	68,56,480 tons	15,716 tons	34,698 tons
1969	70,57,105 tons	25,800 tons	1,47,358 tons
1970	91,38,280 tons	23,693 tons	1,93,269 tons
1971	1,02,34,807 tons	4,813 tons	2,03,283 tons
1972	1,14,35,252 tons	4,989 tons	1,13,318 tons
1973	1,19,84,736 tons	5,334 tons	1,08,455 tons
1974	1,22,25,000 tons	3,000 tons	1,47,000 tons
1975	1,28,62,000 tons	2,000 tons	1,01,000 tons

The following statement gives the trend of the extraction of bauxite in the district :—

Year	Extraction of bauxite
1969	58,460 m. tonnes
1970	74,581 m. tonnes
1971	46,552 m. tonnes
1972	3,524 m. tonnes
1973	143 m. tonnes

As per the provisions of law, the royalty has to be collected on the mineral ore removed from the leased area. The following statement gives the amount collected as royalty by the Mines Department from 1964-65 to 1972-73 :—

Year	Rs.
1964-65	48,68,120·17
1965-66	57,82,177·07
1966-67	57,02,557·56
1967-68	47,33,025·05
1968-69	49,19,364·13
1969-70	47,84,553·58
1970-71	51,84,579·22
1971-72	57,27,903·16
1972-73	89,65,621·55

In the past, quarrying licences for stones in Government land were granted by the Mines Department. During the year 1969, eight such licences were granted and a tax of Rs. 4,000·00 was collected thereon.

Fixed tax has also been levied on the mineral concessions governed under the Portuguese Mining Laws. This tax has been to the tune of Rs. 4,00,000·00 every year upto 1966. The Controller of Mining leases has modified some of these concessions with effect from January 1, 1966. After notification of a mining concession, the first tax will not be levied and the leases are liable to pay Dead Rent from January 1, 1966.

The following statement will give an idea about the collection of revenue by the Mining Department under different heads, from 1970-71 to 1972-73 :

	1970-71	1971-72	1972-73
Royalty	51,84,579.22	57,27,903.16	89,65,621.55
Dead Rent	Nil	45,375.87	30,750.02
Fees for Certificate of approval ..	12,000.00	2,500.00	7,500.00
Application fees for P.L. ..	864.00	Nil	88.00
Application fees for M.L. ..	7,800.00	1,800.00	1,200.00
Miscellaneous	N.A.	3,684.82	3,218.55

The mining industry is the biggest single industry in the district, providing employment to a large number of workers. It is basically an export oriented industry. During the year 1973, there were 97 mines engaged in extracting iron, 186 extracting ferro-manganese, 11 extracting silica, 5 extracting bauxite and one extracting manganese ore in the district.

Assessment of ore reserves

Since Liberation, the Geological Survey of India team has been working in the district for the assessment of ore reserves. They have now submitted a preliminary report on the geology and mineral resources of the district. According to the said report, the estimated indicated reserves of recoverable iron ore with about 58 per cent iron content is of the order of 405 million tonnes out of which 85 million tonnes is lumpy ore and smalls and about 320 million tonnes, fines and powdery. Also indicated recoverable reserves of about 6·3 lakh tonnes of black iron ore and 12·3 lakh tonnes of manganese ore with an average manganese content of about 38 per cent are estimated.

CO-OPERATIVE DEPARTMENT

Prior to the liberation of the district, there did not exist a single co-operative institution in the district and the co-operative movement was conspicuous by its absence in spite of the fact that the movement

had made strides in the adjoining Indian territories. To boost up the co-operative movement in the district, the Department of Co-operatives was, for the first time, started in the district in November 1962. To facilitate the formation of co-operative societies without any delay, the Maharashtra Co-operative Societies Act, 1960, was extended to the district with slight modifications from December 18, 1962. The Co-operative Societies Rules framed under the aforesaid Act were also enforced in the district from January 1, 1963, with slight modifications suited to the territory.

The department is headed by the Registrar of Co-operative Societies with his headquarters at Panaji. He is assisted in his work by one Deputy Registrar, one Assistant Registrar, one Chief Auditor, three Senior Inspectors, three Junior Inspectors four Special Recovery Officers and other necessary technical and ministerial staff. The total strength of the department as on December 31, 1973, was 102. The department of Co-operatives has been divided into two wings *viz*. Co-operative Wing and Marketing Wing.

Arbitration and awards have been provided for the disputes arising in the co-operative sector. In case of certain disputes, the Registrar of Co-operative Societies has exclusive jurisdiction to hear and decide cases himself or through his nominee as per the provisions contained in the Maharashtra Co-operative Act, 1960 and the Rules made thereunder, both made applicable to the district with slight modifications to suit local conditions. The details of the arbitration cases received and disposed off are as under :—

No. of cases pending for reference to Nominee as on June 30, 1970	861
No. of arbitration cases received during 1970-71 ...	455
No. of arbitration cases referred to Registrar's Nominee	623
No. of arbitration cases reserved by the Registrar for himself	156
No. of arbitration cases pending for reference to Nominee	305
No. of cases pending with Nominee as on June 30, 1970	66
No. of cases decided by Nominee during 1970-71 ...	605
No. of cases pending with Registrar's Nominee as on June 30, 1971	84

As on June 30, 1971, there were 4 Registrar's Nominees and the number of Nominees being small it was rather difficult for this department to expedite disposal of arbitration cases. However, efforts are

being made to appoint more Nominee to cope up with the increasing work load of arbitration cases.

The progress of execution of awards through the Revenue Commissioner is as under :—

No. of awards pending execution with the Revenue Commissioner's Department as on June 30, 1970	124
No. of awards sent for execution to the Revenue Commissioner's Department during 1970-71	21
No. of awards executed by the Revenue Commissioner's Department during 1970-71	6
No. of awards pending execution with the Revenue Commissioner's Department on June 30, 1971	139

Audit

The Audit section of the department forms part of the Co-operative Wing and is placed in charge of the Chief Auditor of the Co-operative Societies. For facilitating the work relating to societies, officers of Senior and Junior Auditors have been fixed at taluka headquarters and system of continuous and concurrent audit has been introduced for all types of Co-operatives in the district since the inception of the Co-operative movement here for ensuring their good working. Thus all societies are being generally audited every quarter and suggestions on vital points are made for regularity, etc. and rectification immediately on completion of quarterly audit. However, audit memos are issued after the Annual Audit which are considered by the General Body Meetings. In a tract new to co-operation, this method has proved helpful in imparting information on correct methods of keeping accounts, registers and documents, systematising monetary transactions and in keeping watch on the operations of the societies.

Co-operative training and education

The Co-operative movement in this district has only a standing of about 11 years and as such, the same is in infant stage. The district being small, so far, neither a State Co-operative Union nor a Co-operative Training School could be set up. In the circumstances, the work of Co-operative publicity is being carried out by the department. From 1963-64 to 1966-67 a scheme for imparting training to employees, office bearers and members of service and other Co-operatives in rural areas was implemented in the light of the lines indicated by the National Co-operative Union of India by holding 3 days co-operative training classes at the headquarters of the societies and by paying trainees attendance allowance at the rate of Rs. 1·50 per day.

The total number of persons trained since the implementation of the said scheme, from 1963-64 to 1966-67 is as follows :—

Year	*Persons trained*
1963-64	493 (inclusive of 123 secretaries).
1964-65	4,080 members of Co-operative societies.
1965-66	6,367 members of Co-operative societies.
1966-67	3,232 members of Co-operative societies.

The aforementioned scheme of training had to be discontinued on account of some technical objections raised by the outside Audit Department. In the absence of any scheme of co-operative training since then, necessary guidance and assistance in running the working of the societies and maintenance of accounts is being given by the members of the field staff of the department, Block Agencies and Bank at the time of their visits to these societies for the purpose of audit/inspection/inquiry or for attending meetings.

The following table gives the taluka-wise details of co-operative societies in the district as existed on *June 30, 1971*.

TABLE No. 4.—TALUKA-WISE DETAILS OF THE CO-OPERATIVE SOCIETIES IN THE DISTRICT OF GOA.

Block 1	Service 2	Consumers 3	Transport 4	Fisheries 5	Processing 6	Industrial 7	Dairies 8
Tiswadi ..	13	11	1	2	2	2	6
Bardez ..	26	1	3	2	..	3	7
Bicholim ..	17	6	..	..	..	1	7
Satari ..	12	..	..	..	..	3	11
Pernem ..	15	3	..	..	..	1	..
Ponda ..	17	3	1	2	..	1	14
Salcete ..	26	9	1	1	..	5	1
Canacona ..	5	..	..	1	..	1	1
Sanguem ..	11	6	..	..	..	1	7
Quepem ..	13	1	..	..	..	1	1
Mormugao ..	5	11	1	1	..	1	..
Total ..	160	51	7	9	2	20	55

TABLE No. 4.—contd.

Block 1		Poultry 9	Housing 10	Farming 11	Marketing 12	Credit 13	Banks 14	Total 15
Tiswadi	..	1	13	1	1	6	2	61
Bardez	..	..	3	..	..	..	1	46
Bicholim	..	..	..	..	1	1	..	33
Satari	..	..	..	1	1	1	..	29
Pernem	..	..	..	..	..	1	..	20
Ponda	..	..	1	..	2	1	..	42
Salcete	..	1	4	.	1	1	..	50
Canacona	..	..	..	..	..	..	..	8
Sanguem	..	..	..	..	..	2	..	27
Quepem	..	..	..	..	..	1	..	17
Mormugao	..	..	..	..	..	4	..	23
Total	..	2	21	2	6	18	3	356

The Goa Central Consumers Co-operative Stores Limited Panaji

This is the only consumers co-operative store in the district and the membership comprises consumer co-operative and the service co-operatives dealing in the distribution of controlled commodities and consumer goods.

Membership	...	...	...	175
Share Capital	...	...	...	1,22,000·00

The Government assistance to this institution is of the order of Rs. 1,00,000·00 in the form of share capital and Rs. 80,000·00 in the form of loans. The work of wholesale distribution of sugar in the district has been entrusted to this store. The total turnover and net profit made during the year under report was to the tune of Rs. 98,42,000·00.

Urban Credit Societies

On June 30, 1971, 18 urban credit societies and 2 urban co-operative banks were in existence. These societies are not financed by the Government. The contribution comes from the members by way of deposits and additional share capital.

Salary Earners Co-operatives

The main object of these societies is to meet the miscellaneous loans of its members. There are about 19 societies with a membership and share capital of 3,007 and Rs. 2,86,000·00 as on June 30, 1971.

ELECTRICITY DEPARTMENT

Prior to the liberation of the territory there were a few isolated diesel generating stations in the district. Only six municipal towns *viz.* Panaji, Margao, Ponda, Vasco-da-Gama, Mapusa and Sanvordem had the benefit of power supply in the district. The aggregate power demand in these towns was about 1·5 M. W. and power supply was looked after by municipalities and private agencies and the rates were also high and were not uniform in all the regions. The district was awfully in need of power development at the time of Liberation.

With a view to achieving rapid and planned development of power supply, the Electricity Department was established in January 1963. The department is headed by the Chief Electrical Engineer. He is assisted in his work by five Executive Engineers, 26 Assistant Engineers (Electrical), one Assistant Engineer (Civil) and other technical and non-technical staff of Junior Engineers, Divisional Accounts, etc. The total strength of the department at the end of the year 1975-76 was 1,543.

Soon after the creation of the Electricity Department, a decision was taken to purchase power in bulk from the neighbouring states of Karnataka and Maharashtra, for distribution of the same in the district. Accordingly, a scheme was framed for power development in Goa. The implementation of this scheme which started during the Third Five Year Plan is in progress.

The six electric supply undertakings in the district under the control of municipalities and licencees, were taken over by the Electricity Department.

During the period June 1963 to September 1964, bulk supply from Maharashtra to the extent of 2 MVA at 33 KV and from Karnataka to the extent of 0·5 MVA at 33 KV and 10·5 MVA at 110 KV was arranged.

For availing 2 MVA supply from Maharashtra, erection of a double circuit 33 KV lines, 65 kms. in the district and 120 kms. in Maharashtra and construction of four 1 MVA, 33/11 KV sub-stations one each at Pernem, Bicholim, Panaji and Ponda were undertaken. With the completion of works in Pernem area, supply at Pernem commenced from December 1963, and in Bicholim, Panaji and Ponda from April 1965 after completion of the remaining works.

A single circuit 33 KV line, 52 kms. in the district and 100 kms. in Karnataka and construction of a 1 MVA sub-station at Margao were completed to get 500 KVA supply from Karnataka in July 1965. A double circuit 110 KV line 32 kms. in the district and 51 kms. in

Karnataka and construction of a 10·5 MVA, 110/33 KV sub-station at Ponda were completed to avail 10·5 MVA supply in November 1966 and supply commenced. On completion of these sub-stations diesel power houses were closed down.

Power demand in the district is steadily increasing. From 2·2 MV in 1965-66 it has increased to 26 MV in 1972-73. As per the present forecast, power demand in the district is expected to increase from 22 MV in 1970-71 to 89 MV in 1973-74. The per capita consumption of electrical energy has increased more than ten fold from 8·5 KWH during 1965-66 to 170 KWH during 1975-76. By the end of March 1976, all towns and 344 villages in the district had the benefit of power supply.

The scheme for Power Development in the district estimated to cost Rs. 1,146 lakhs, takes care of power development in the district upto 1975-76. Another scheme costing Rs. 1,106 lakhs has also been prepared for the power development in the district during the Fifth Five-Year Plan. These two schemes are essentially a transmission, sub-transmission, sub-stations, distribution and rural electrification based on availing bulk supply from the neighbouring states of Karnataka and Maharashtra.

Some of the major works undertaken upto the Fourth-Five Year Plan, in the district are listed below :--

1. Commissioning of 110 KV D/C line from Karnataka-Goa border to Ponda in Goa.
2. Commissioning of 90 MVA, 110/33/11 KV sub-station at Ponda.
3. Installation of 6·3 MVA 33/11 KV receiving stations one each at Pernem, Bicholim, Panaji, Margao, Sancoale, Sanvordem and Mapusa.
4. Laying of 320 c/kms of 33 KV lines, 733 kms. of 11 KV lines, 1,171 kms. of L. T. lines and 377 distribution transformers.

In view of the rising demand for power supply in the district, the following major works have been envisaged during the Fifth-Five Year Plan :—

1. Erection of 34 kms. of 220 KV D/C line from Maharashtra-Goa border to Ponda.
2. Establishing of a 220/110/33 KV sub-station at Ponda.
3. Increasing the capacity of existing stations at Panaji, Bicholim, Margao, Sancoale, etc. from 6·3 MVA to 10 MVA.
4. Laying of additional 124 kms. of 33 KV line for interlinking the existing sub-stations and new sub-stations, and electrification of all towns and villages in the district.

DIRECTORATE OF FISHERIES

Prior to the Liberation there was no separate Fisheries Department in the district. However, the fishery activities were looked after by the Board of External Trade and the Office of the Captain of Ports.

Soon after Liberation, the Ministry of Food and Agriculture, Government of India, appointed a study team consisting of three fishery experts to examine the potential of the fishery activities in the district. The main object of the study was to :

(a) ascertain the present general status of the fishing industry ;

(b) to ascertain the possibilities of deep-sea and off-shore fishing ;

(c) to ascertain the possibility of utilisation of the fishing trawlers belonging to the erstwhile regime ; and

(d) to suggest steps for fisheries development to be taken immediately and also on a long range basis.

On the basis of the recommendations suggested by the aforesaid committee, the Directorate of Fisheries came into existence (*vide* Government Order No. DF-372-FYP-62-27 dated 2nd January 1963) and as such all the fishery activities in the district were for the first time effectively organised. The department is headed by the Director of Fisheries, who in turn is assisted in his work by the necessary technical and ministerial staff. The total strength of the staff in the year 1974-75 was 192.

Consequent upon the establishment of the department, a survey of the fishery activities was conducted with a view to exploring and developing marine fisheries in the district on scientific basis. Financial assistance[1] is rendered to the fishermen in the form of loan and subsidy for the purchase of marine diesel engines, construction of hull, purchase of fishery requisites like nylon twine, cotton twine, hemp twine, diesel oil, etc.

In order to improve the socio-economic conditions of fishermen and lessen their dependence on middlemen a number of schemes for the development of Fisheries Co-operative have been framed, under which financial assistance in the shape of grant of Managerial Subsidy, short and medium term loans and Government contribution towards share capital of the society is given. Ten societies have so far been benefitted by these developmental schemes. Besides in order to preserve the fish, the departmental Ice Factory supplied ice at concessional rates to the fishing community.

Besides financial assistance, the department has an up-to-date Research Laboratory conducting biological research and a statistical

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[1] For details Chapter 6 may be seen.

wing, an offshore fishing station, a training centre, etc. By the end of the financial year 1974-75 about 144 candidates had been trained by this Centre. The Department has so far sent 15 candidates for higher training to the Central Institute of Fisheries Operatives, Cochin and four officials of the Department have been given training at Bombay and Mangalore. In order to provide service and overhauling facilities to the mechanised boats, the department has already undertaken the construction of slipway and service station which is likely to be completed in the near future. The department has already taken up the programme of estuarine farming. The estuarine farm was established in 1973 and stocking for the first time was done in June 1973. This type of fish is made available after 2 to 3 stocking seasons to the public during the lean period and the advantage of fish farms will be demonstrated to the inland fishermen and thereby foster in them an interest to take up inland culture of fish in marshy land which will be provided by the Government.

It is also proposed that certain tanks at tourist centres will be stocked with exotic type of fish and the tourists will be permitted to do angling on payment of a nominal charge and fish caught by them will be considered as their property.

In order to provide berthing and landing facilities, the Government has already undertaken the establishment of a fishing harbour at Caranzalem for which a preliminary survey (subsail test) is being carried out and it is proposed that if the results of these tests are encouraging, the fishing harbour will be developed at that place. This will be a huge complex of fishery project not only for Goa but also in the national interest.

Under the powered fishing scheme the department is carrying on exploratory work of fishing in deep waters. The department also provides processing facilities such as ice, place freezer, frozen storage, processing halls, etc. to the processors and the result has been that half a crore of rupees worth of prawns and frog legs, etc. have been exported from Goa. In order to provide proper marketing facilities, Fisheries Department has established a Fisheries Federation which looks after marketing of fish from the coastal villages to the interior where fish is a rare commodity. The department has one cold storage unit and ice factory at Canacona and the work of the construction of frozen storage complex at Panaji is in progress.

DIRECTORATE OF TRANSPORT

The department is headed by the Director of Transport with his headquarters at Panaji. He is assisted by one Assistant Director, four Motor Vehicle Inspectors, four Assistant Motor Vehicle Inspectors and other necessary technical and ministerial staff.

The Director of Transport is also the *ex-officio* Member-Secretary of the State Transport Authority constituted under section 44 of the Motor Vehicles Act, 1939. The authority is composed of a Chairman and five members (3 officials and 2 non-officials) including the Member-Secretary.

From January 1, 1965, the administration of motor vehicles laws has been carried out by the Directorate of Transport with its headquarters at Panaji and sub-offices at Daman and Diu. The functions of the Directorate of Transport cover the licensing of drivers, registration and periodical inspection of transport vehicles for their mechanical fitness, grant of road permits to transport vehicles and enforcement of Motor Vehicle regulations. It is also the duty of the Directorate to recover and levy taxes on motor vehicles.

BUREAU OF ECONOMICS, STATISTICS AND EVALUATION

The Satistical services in the territory started as early as in the year 1878, when a section was set up under the Directorate of Public Works with a view to conducting population censuses in the territory, and which function continued till 1896. In 1896, the section was brought under the *Secretaria Geral do Governo*. However, the enactment of a legislation, known as 'Carta Organica' approved by Decree No. 12499-A of 4th October, 1926, provided for the creation of a Directorate of Statistics. Accordingly, by Order No. 529 of the 6th September 1927, this Directorate was set up, and rules for its functioning were framed, but no special staff was allotted to it. The Director of Civil Administration held additional charge as the Director of Statistics and the employees of the Civil Administration were entrusted with its work along with employees from other departments posted on temporary basis. A post of Secretary of Statistics was also created. The Directorate was without a Director or appropriate staff, performing its functions within a system of statistical decentration. The collection and processing of data was done by various civil and military offices which thus functioned as sections of the Directorate.

This Directorate of Statistics was abolished by Legislativo Diploma No. 506 of the 13th August, 1931 and a Department of Statistics was set up, which like previous organisations, was put in charge of the Director of Civil Administration. A cadre was created to this Department which consisted of a Head of the Department, a Secretary, a Draughtsman, a Typist and a Peon.

The decentralised system in force until then was maintained, and the Permanent Committee of Statistics was dissolved.

The Statistical organisation proper as such was provided to the territory in December 1945 with the publication of Decree No. 35230

dated the 8th December, 1945. Consequently, the Department of Statistics was raised to the status of a Central Department with the designation of 'Central Department of Statistics and Information' having two sections, one dealing with statistics and the other with information services.

In 1958, the Central Department of Statistics and Information was abolished and the Statistical Services in charge of the Department functioned as a subordinate office under the Directorate of Economic Services and General Statistics. The information services functioned in a separate department first under the Directorate of Economic Services and later independently under the designation of Centre of Information and Tourism.

After Liberation, the department was separated from the Directorate of Economics (by Order No. DF-372-FYP-62/27 of 2nd January 1963) and was reconstituted on more broad lines so as to cover up most of the important aspects of planning and development in this territory.

In the year 1968 (by Government Order No. F-80-5-68-GSD of 17th July 1968) various statistical cells functioning in other Government departments, along with the technical staff of the General Statistics Department were brought under the Common Statistical Cadre, with a view to having better planning and greater co-ordination of work and also avoiding the multiplicity of the posts of different designations carrying different scales of pay.

However, with the amalgamation of the former General Statistics Department and Plan Evaluation Organisation on 24th September 1971 (*vide* Government Order No. 4-11/71 PLG) the expanding activities of the Department has been further increased by establishing the Bureau of Economics, Statistics and Evaluation. The department is now headed by the Director, Bureau of Economics, Statistics and Evaluation. He is assisted by three Deputy Directors, five Statistical Officers and a few Research Assistants, besides other requisite ministerial and other technical staff. The main functions of the department are cited as under :—

1. Collection, processing and analysis of various types of statistical data relating to socio-economic aspects of this Union Territory ;
2. Providing technical guidance to other departments in the field of statistics ;
3. Training the junior staff engaged in various statistical services ; and
4. Publication and graphical presentation of statistical information.

Contribution

In what follows are described in brief, some of the activities undertaken by the General Statistics Department since Liberation.

With a view to estimating the average yield of paddy, the Department took up a Crop Estimation Survey by the random sampling method

under the direct technical collaboration of the Directorate of National Sample Survey. The Survey was first started during the kharif season of 1967-68 and is carried out since then twice every year during the agricultural seasons.

A major survey of goods traffic by road in the district was launched in May 1969, mainly with the object to assess inter-state and intra-state volume of goods traffic and to obtain information about the pattern of movement of commodities, type of vehicles on roads, their average length of haulage, type of goods carried, their quantity and extent of transportation and intensity of traffic movement. The study also estimates the total valume of road transport as a whole in the district and evaluates the performance of public and private carriers. The survey was carried out in two phases.

The Department also imparts training at regular intervals to junior statistical personnel in the methodology and techniques adopted in collection, compilation and processing of statistical data.

Under the recommendations of the Central Statistical Organisation, New Delhi, the Department conducted during May and August 1969, a survey of small industrial units with the main objective to prepare an up-to-date list of small industrial units, having an employment of 5 to 9 persons if using motive power and 5 to 19 persons if not using motive power. A directory consisting of 166 small industrial units not registered under the Factories Act, 1948, has been prepared.

Statistical data on current building activity both in the public and private sectors are also collected by the Department under the scheme of Housing Statistics, which is being implemented since 1967-68. Besides these, the department collects information on prices of building materials, employment in building activity and building cost index numbers are also compiled.

Manpower studies are held to find out the utilization pattern of arts and science graduates with a view to providing an insight into the relationship between the expansion of courses of study at college level and the employability and pattern of employment of graduates of different faculties. A publication "Fact Book on Manpower" was published recently which brings out a comprehensive integrated bibliography on all available manpower statistics pertaining to this territory.

Collection of information on retail prices and services is carried out by the Department for the construction of monthly employees' families in Panaji town. These indices measure the changes in the prices paid by the middle class families on various items used for daily consumption.

Under the scheme of Vital Statistics, facts and figures relating to births, deaths, marriages, etc. are collected. Besides, the Department

has taken up a pilot study of Sample Registration Scheme during the year 1969-70.

The department now publishes several publications, such as the Statistical Year Book, which gives a detailed information of the various socio-economic aspects of the Territory. The Statistical Pocket Book, which is also a yearly publication, provides a concise factual account of social and economic trends under important heads of development. The Budget in brief, attempts an analytical summary of the Budget Estimates with the help of simple and readily intelligible statements. Goa, Daman and Diu at a Glance, is a publication issued in series and provides in brief all the important and available talukawise statistics relating to this territory. Socio-Economic Indicators of Goa, Daman and Diu are also brought out by the Department which compare the district with the rest of the country in respect of important socio-economic developments. Statistical information of general nature are published by the Department every quarter, in its recent publication, the Quarterly Bulletin. Another addition to its publications, is the map of the district which will be introduced shortly and which will provide about 25 coloured maps on different subjects. Each map will be accompanied by relevant statistical information and a brief write-up. Since the creation of the Bureau of Economics, Statistics and Evaluation in 1971, various non-plan schemes such as Milk Production Survey, Livestock Census, 1971 and World Agricultural Census, 1971, has been undertaken. The survey work of these schemes has been completed and the Report of the same is in progress.

Besides six evaluation studies were completed till the end of 1972 and reports thereon were published. Another six evaluation enquiries have been undertaken, four of which are likely to be completed shortly.

REGISTRATION DEPARTMENT

The Registration Department is headed by the District Registrar, Goa, who is the head of the office of the Registrars and Notary Services. He is assisted in his work by three Land Registrars and twelve Civil Registrars-*cum* Sub-Registrars and the other necessary ministerial staff. The total strength of the department during the year 1969-70 was 104.

Since November 1965, new offices have been opened at Panaji, Margao, Mapusa, Vasco-da-Gama, Ponda, Quepem and Bicholim. With the implementation of the Goa, Daman and Diu Village Panchayat (Registration of Births and Deaths) Rules, 1966, the registration of births and deaths is being done by Secretaries of the Village Panchayas. The

said rules were by the year 1968-69 extended to almost all talukas with the exception of Pernem and Satari. On extension of the said Rules to all the talukas, the number of registration out-posts has been reduced from 25 to only 2, one at Morjim (Pernem) and the other at Vanakbara (Diu). The facilities for registration work have been provided in all the talukas excepting those of Pernem, Satari, Canacona and Sanguem by the end of 1969-70.

EXCISE DEPARTMENT

The Excise Department is headed by the Commissioner of Excise with his headquarters at Panaji. He is assisted in his work by one Assistant Commissioner, one Superintendent of Excise, and one Excise Officer besides eleven Excise Inspectors, five Sub-Inspectors, one hundred and thirty-three Excise Guards and other necessary executive and ministerial staff.

The Excise Department, besides the head office at Panaji has established eleven subordinate offices (Excise Stations) in each of the taluka headquarters of the district of Goa. The department, for administrative convenience, has been divided into two wings *viz.*, Administrative and Executive. At the headquarters both the wings are controlled and supervised by the Assistant Commissioner of Excise under the directions of the Commissioner of Excise. At the taluka level the Excise Inspector controls both the administrative as well as the executive wings of the department.

Since the manufacture of liquor from toddy and cashew juice form important sources of revenue, the talukas have been divided into zones and the zonal areas have been allotted to Guards to supervise the toddy tapping and manufacture of cashew liquor during the cashew season. In the zones, as far as possible, Excise posts have been established and the same are placed under Excise Guard/Assistant Excise Guard wherever necessary. In addition, there are Excise check posts installed to check the movement of liquor in and out of this territory.

At the distillery/brewery/factory manufacturing Indian made foreign liquor/medicinal/toilet preparations, a Sub-Inspector of Excise has been posted permanently and he is incharge of the distillery/brewery/factory. The supervisory control rests with the Inspector of Excise within whose jurisdiction the distillery/brewery/factory is situated.

SALES TAX DEPARTMENT

The Sales Tax Department of Goa, Daman and Diu was created with effect from the first day of November, 1964, to implement and enforce the Goa, Daman and Diu Sales Tax Act, 1964 and the Central Sales Tax Act, 1956. At the time of creation of the Sales Tax Department, for the purpose of administrative convenience in carrying out the

provisions of Goa, Daman and Diu Sales Tax Act, 1964 and the Central Sales Tax Act, 1956, and the Rules made thereunder, the Union Territory of Goa, Daman and Diu was divided into the following two wards having jurisdiction over the areas noted against each :—

(*i*) Panaji—talukas of Tiswadi, Ponda, Bardez, Pernem, Bicholim and Satari.

(*ii*) Margao—talukas of Salcete, Mormugao, Quepem, Sanguem and Canacona.

At the time of enforcement of the Goa, Daman and Diu Sales Tax Act, 1964, and the Central Sales Tax Act, 1956 and the rules made thereunder, there were only 978 dealers registered under the Central Sales Tax Act, 1956. Due to the steady growth in the number of registered dealers it was found difficult to cope up with the work and therefore for the purpose of administrative convenience and effective implementation and enforcement of the Acts and Rules, the necessity of opening a new Ward Office at Mapusa was acutely felt. Thus the Union Territory of Goa, Daman and Diu was divided into the following three wards with effect from 2nd January, 1967 comprising areas mentioned against each :—

(*i*) Panaji—talukas of Tiswadi and Mormugao.

(*ii*) Mapusa—talukas of Bardez, Pernem, Bicholim, Satari and Ponda.

(*iii*) Margao—talukas of Salcete, Quepem, Sanguem and Canacona.

The department is headed by the Commissioner of Sales Tax who is assisted by one Assistant Sales Tax Commissioner, five Sales Tax Officers, five Assistant Sales Tax Officers and the necessary ministerial and other staff. An independent Sales Tax Tribunal has been created with effect from July 1970 to which the second appeal lies.

DIRECTORATE OF ACCOUNTS

The Directorate of Accounts came into existence as a result of the bifurcation of ' Fazenda ' into Department of Revenue and Directorate of Accounts with Accounting and Bill Passing functions and Treasury *vide* Notification No. FA(2), dated 16th December, 1963. Formerly the work was done by the ' Fazenda '. The Directorate, as the name suggested, is headed by the Director of Accounts. He is assisted in his work by Deputy Directors, Accounts Officers and other necessary staff.

The main functions entrusted to the Directorate are as follows :—

(1) Pre-check.

(2) Making payments.

(3) Maintenance of Accounts of all the receipts and payments (of Union Territory Government) and compilation of the Appropriation and Finance Accounts.

(4) Dealing with Audit queries made by the Audit Officer.

(5) Rendering financial advice or advice on rules and regulations whenever necessary and advice in all accounting matters.

(6) Same functions as referred to as (1) and (5) above in respect of Central Government Departments operating in the Union Territory of Goa, Daman and Diu.

(7) Controlling the Treasuries and Sub-Treasuries.

(8) Statutory Audit of Village Panchayats Accounts.

(9) Critical examination of the stocks and stores in all the Departments/Offices and verification of the correctness of accounts maintained.

(10) Undertaking special investigations at the instance of Government.

(11) Finalisation of Pension Cases.

Besides the functions mentioned above, the Directorate is in charge of recruitment and training of Accountants recruited under the Account Cadre Rules.

DIRECTORATE OF EDUCATION

It was only during the first quarter of the 20th Century that attempts were made by the alien regime to create the Directorate of Education in the Union Territory of Goa, Daman and Diu. It came into existence on 29th June, 1923.

However, in 1925 the Office of the Director of Education was abolished and was replaced by Primary Education Office, which continued till 1947. With the reforms undertaken in 1947, the control of the educational system in the territory was entrusted to the Public Instruction Council under the Presidentship of the Governor-General.

It was only in 1957 that the fundamental guidelines were laid down, for encouraging the overall development of education in the territory. In view of this, the Office of Health Services was merged with that of Education, constituting the Directorate of Education and Health Services. This system continued for a short period. The Directorate of Education and Health Services was split into two and a separate Directorate of Education came into existence in 1960. For administrative purposes the same was divided into two divisions, one for primary and 'Normal' education and the other for the remaining subjects.

With the liberation of the territory in December 1961, the Directorate of Education was completely reshuffled and enlarged with a view to eradicating illiteracy among the masses.

At present the administration of general education is vested in the Education department of the Government of the Union Territory of

Goa, Daman and Diu and private managements. The Directorate of Education is headed by the Director who is also *ex-officio* additional Secretary to the Department of Education. He is assisted by four Deputy Directors, one Assistant Director, one Statistical Officer, one Accounts Officer and one Social Education Officer on the administrative side. For inspection of the educational institutions, he is assisted by Inspectors of schools and Assistant Deputy Inspectors of Schools at different levels.

At the taluka level, Assistant Deputy Inspectors are responsible for the inspections of primary schools including the middle schools. The inspection of Secondary Schools is the responsibility of the Inspectors and Deputy Inspectors appointed for the purpose. There are separate Inspectors of Social Education and Physical Education.[1]

DIRECTORATE OF HEALTH SERVICES

The Directorate of Health Services has at its head, the Director of Health Services. His department covers the extensive health programmes and facilities introduced and spread throughout the territory to serve the needs and provide medical relief to the people.

To carry out these services in the best possible manner, the department is divided into various sections each with an Officer at its head. Thus, immediately responsible to the Director, we have the Deputy Director of Health Services, Medical, the Deputy Director of Health Services, Public Health, the Administrative-*cum*-Accounts Officer, the Drugs Controller, the Medical Officer in charge of the Health Intelligence Bureau, the Chief Medical Officer of the Vaccine Institute, the Chief Radiologist of the X-Ray Institute and the Chief Medical Officer of the Public Health Laboratory. Each of these Officers have under them, varying numbers of Assistants to aid them in their particular field of work.

The Deputy Director of Health Services, Medical, has under his charge, the Mental Hospital, the T.B. Hospital, the T.B. Sanatorium, the Leprosy Hospital, the Isolation Hospital, two Government aided Hospitals, three Referral Hospitals and nine Hospitals attached to the Primary Health Centres.

The Deputy Director of Health Services, Public Health, has an even wider field to cover and supervise. He has to look after all the four Urban Centres, 13 Primary Health Centres and the 29 Rural Medical Centres in the district. Either a Medical or a Health Officer is stationed at each Primary Health Centre, and Rural Medical Officer is stationed

[1]Further details about education are given under Chapter 15—Education and culture.

at each of the Rural Medical Centres. Also, under this Public Health section are included all the Communicable Diseases programmes like Malaria, Filaria, Small-pox, V. D., T.B. and Leprosy Control Programme. Besides these, there are also the other Health Programmes like Maternal and Child Welfare, Family Planning, School Health and Nursing School as well as the four Dental Clinics and a mobile dental clinic, and State Nutrition.

The Chief Medical Officer of the Public Health Laboratory has a Medical Officer and four Assistants to aid him in the Bio-chemistry, Food and Drinks and Water Sewage divisions.

The Chief Medical Officer of the Vaccine Institute has an Assistant Medical Officer and a Health Service Officer immediately under him, to assist him.

The Drugs Controller, besides having an Assistant in charge of Medical Stores, also has three other Assistant Drug Controllers.

DIRECTORATE OF CIVIL SUPPLIES AND PRICE CONTROL

The need for the Directorate of Civil Supplies and Price Control was felt due to the fact that the district is a deficit area in foodgrains. During the pre-liberation period the 'Junta' was entrusted with the work of procurement of rice and sugar from the foreign countries and its distribution to the public, building of buffer stock of above commodities—so as to maintain continuity in their supply and maintain control over prices of essential commodities. The 'Junta' was also responsible for the procurement and supply of other commodities to the consumer.

With Liberation, the need was felt for the Directorate of Civil Supplies and Price Control as there was heavy shortfall in the production of foodgrains in 1963-64. With a view to arranging for the equitable distribution of foodgrains, the scheme of informal rationing was introduced in the district. The entire population of the district has been covered under the scheme. The population in possession of informal ration cards during the year 1974-75 for the Goa district was 9,32,904.

The Directorate of Civil Supplies and Price Control came into existence in the year 1963. The Directorate, as the name suggests, is headed by the Director of Civil Supplies and Price Control with his headquarters at Panaji. He is assisted in his work by the Inspectors and sub-Inspectors of Civil Supplies and Price Control and other necessary ministerial and menial staff.

The main function of the Directorate of Civil Supplies are—

(1) to regulate by licence and permit the trade and movement of selected essential commodities;

(2) to arrange for the procurement, storage and distribution of items covered by informal rationing ;

(3) to arrange the building up of stocks when possible to maintain regular supply of commodities distributed through informal rationing ;

(4) to keep watch on the supply position and over prices of essential commodities ; and to

(5) arrange for enforcement of Government Orders regarding food-grains and other essential commodities.

Since its inception almost all the talukas have been provided with foodgrains godowns for the storage to facilitate distribution of food-grains such as rice and wheat to consumers through fair price shops. There are now altogether 22 foodgrains godowns spread all over the district with total storage capacity of 19,250 tonnes.

The Department has introduced a number of measures to regulate trade and movement of essential commodities and to arrest the rising price trend thereof. Informal rationing was introduced since 1964. The committments arising out of informal rationing were met by supplies made available by the Government of India and by supplies procured locally. Buffer stock was built up from imports when possible.

Distribution of foodgrains and sugar at a fair price through fair price shops, and measures to check hoarding and profiteering in respect of essential commodities such as foodgrains, sugar, kerosene, petroleum products, cement, *vanaspati*. etc. have checked unwarranted increase in prices of essential commodities and contributed towards holding the price line at a reasonable level.

Food grains were supplied by the Government of India to the district through the Food Corporation of India to the tune of 23,000 tonnes of rice and 29,500 tonnes of wheat during the calendar year 1973 and transported by sea and rail and were stocked in Government godowns in various talukas. Import of rice was supplemented by paddy procured locally which amounted to about 3,450 tonnes. Foodgrains were distributed to consumers on ration cards under informal rationing through Fair Price Ssops mostly run by Consumers' Co-operative Societies. People could supplement the quantum of foodgrains got through the above scheme, by purchasing foodgrains in open market also. The quantum of foodgrains was 120 gms. of rice and 100 gms. of wheat per day, per adult. The quantum of sugar was 500 gms. per adult, per month. To ensure smooth supply of foodgrains to the Fair Price Shops, this Department was having 15 store godowns of 550 tonnes capacity, 4 godowns of 2,000 tonnes capacity and 3 godowns of 1,000 tonnes capacity. The district has 159 Fair Price Shops and 147 Co-operative Societies for the purpose of distribution of rationed items.

OFFICE OF THE CONTROLLER OF WEIGHTS AND MEASURES

Prior to the adoption of standard of weights and measures in the district, weights and measures were under the control of respective municipalities in each taluka. Each municipality had its own law in respect of the enforcement of weights and measures. Weighing and measuring instruments were not covered. Levy of fees was on the basis of class of trade indicating compulsory quantity of weights and measures in possession by such class of trade. In all such aspects, administratively and technically, municipalities handled the subject of weights and measures in different ways.

The constitution of India provides for the set up of weights and measures and according to Schedule VII devolves the responsibilities regarding the same on both the Central as well as the State Governments. The Central Government is responsible for the establishment of standard of weights and measures which fall within the purview of the State Government. The policy of the set-up of Weights and Measures is to maintain the uniformity throughout the country.

The Standard of Weights and Measures activities in the district are governed under the standards of Weights and Measures Act, 1956, a Central Act. The Goa, Daman and Diu Weights and Measures (Enforcement) Act, 1968 and the Goa, Daman and Diu Weights and Measures (Enforcement) Rules, 1969, were made applicable to the district from the 17th and 18th February, 1969, respectively.

Organisation

The Weights and Measures Organisation in the district is headed by the Controller of Weights and Measures with his headquarters at Panaji. He has under him, one Assistant Controller and Inspectors. The duties of the Inspectors as prescribed under the Goa, Daman and Diu Weights and Measures (Enforcement) Rules, 1969, are under :—

(*a*) Verification and stamping of weights, measures, weighing and measuring instruments ;

(*b*) inspection of weights, measures, weighing and measuring instruments and package of commodities.

(*c*) collection of fees and other charges, and submission of the reports and returns prescribed in the Rules or required by the Controller ;

(*d*) safe custody of articles seized and detained in the course of his duty ;

(*e*) safe and property custody of the secondary and working standards and other equipment entrusted to his charge ;

(*f*) keeping up-to-date the census of traders and establishment in his area ;

(*g*) maintenance of such books as may be specified by the Controller ;

(*h*) such other duties under the Act and Rules as the Controller may, by special or general order, specify.

Inspectors are required to verify the weights, measures, weighing and measuring instruments pertaining to the establishments of trade and commerce, including Government and semi-Government departments and autonomous bodies.

To maintain the accuracy of weights and measures in the commercial field, the Inspectors get the working standards verified with the secondary standards. Limits are fixed by the Rules for the working standards. The Secondary standards are certified by the National Physical Laboratory at New Delhi.

One Senior Regional Inspectorial Unit at Panaji, two Junior Regional Inspectorial Units with headquarters at Margao and Mapusa are established. Three working standard laboratories have been established at the respective units and one secondary standard laboratory is installed at Panaji.

The Inspectors are authorised by the Controller to register the establishment of trade.

For the changeover to weights and measures of the specifications prescribed, the Act makes the provision for a manufacturer and the dealer in order to meet the demand for weights and measures from the traders. The Controller issues the licences to such agencies. The number of establishments of dealers in the district is 15. The weights and measures imported from outside this district are subject to the approval of the Controller as to maintain the standard commercial weights and measures in the district. The Controller of Weights and Measures is the sole authority in respect of issuing licences for the purpose of adjusting or repairing Weights and Measures in the district.

Fees are collected for the issue of the manufacturer's, repairer's and dealer's licences. There is a revenue by way of verification, depending on the denomination of Weights and Measures. Verification and inspection work is in progress. Inspection is done with a view to eradicating the possession and use of illegal Weights and Measures. So far, the department has launched, 36 prosecution cases out of which 24 cases have been compounded by the Controller against the payment of Rs. 2,075·00 in total. In respect of 10 cases, where it could not be compounded, the complaints were filed in the court, and two cases have been settled in conviction, imposing a penalty of Rs. 1,500·00 in total against the offenders.

DEPARTMENT OF INFORMATION AND TOURISM

A central office of Statistics and Information was created by the end of the year 1945. The Statistics section was to compile statistics and study the economic and co-operative problems of the territory and the information section was concerned with the publication of 'Noticias de Estado da India' (a fortnightly bulletin of information in Portuguese), Portuguese India news bulletin (a monthly in English) and 'Collecção de Divulgação (a bulletin for carrying out propaganda without any fixed periodicity).

In 1958 however, the Information section was separated. But even then, for two years, it continued to function as a part of the Directorate of Economy. A separate Directorate for Information and Tourism known as the Centre of Information and Tourism came to be established as late as in 1960.

The abovementioned Centre of Information and Tourism although it had two divisions, namely, Information and Tourism, in addition to Administration, it had actually three Sections, namely, Information, Tourism and Popular Culture. The Section of Popular Culture for the purpose of Legislative Diploma was a part of the Tourism wing. The Information Section was to look after the press publicity and production of literature. A number of exhibitions on various items and aspects were also organised. The Tourism Section was mainly to deal with tourists and creation of facilities and promotion of tourist traffic. Facilities such as conducted tours, beautification of beaches and other places of tourist interest were undertaken for the first time on western lines.

At the same time and concurrently with the Information and Statistics Office, a separate section which was known as Press Section of the Cabinet was functioning in the Secretariat under the direct supervision of the Chief of the Cabinet of the Governor General. However, this section played a prominent role for some time before Liberation in so far as press news and press relations were concerned.

After Liberation, the Press Section of the Cabinet was converted into a full-fledged Directorate of Information and Publicity and the functions of the erstwhile Centre of Information and Tourism were restricted to tourism only.

The functions of press releases, press and photo coverages, news bulletins, production of literature, organisation of entertainment and other programmes, etc. found a place in the development plans of this district.

Similarly, the Directorate of Tourism was brought on par with the tourist offices in the rest of the country. Plan schemes specially with

a view to facing the acute shortage of accommodation with the construction of hotel establishments, purchase of buses for organising conducted sight-seeing tours, beautification of beaches and other tourist resorts, purchase of boats and dinghies for pleasure cruises, recreational facilities at the beaches and improvement of roads of tourist importance, etc. were undertaken.

With a view to streamlining the Government machinery and achieving better co-ordination in different agencies, the Departments of Tourism and that of Information and Publicity were grouped together with effect from March 1, 1966.

The normal functions of the reorganised Department involve issue of Press releases and advertisements, press/photo coverages of important official functions, Lt. Governor and Ministers programmes as also detailed publicity of the visiting dignitaries, organising press conferences and tours of journalists ; keeping liaison with the press, arranging audio-visual publicity, control of regional information centres set up in the territory, publication of the monthly magazine "Nave Parva" and all official publicity material like brochures, pamphlets, arranging exhibitions, looking after the research and reference section of the Department, supervision of sale and distribution of publicity material brought out by the Department, provision of tourist facilities and amenities, etc.

In addition to the normal functions referred to above, the Department was also called upon to shoulder additional responsibilities of systematic planned development of Information and Tourism in the district.

In the field of information and publicity, the department has provided radio sets to various village panchayats under the Community Listening Scheme. The objective behind this scheme is to publicise various developmental activities undertaken by Government from time to time at different levels, aiming at emotional integration and economic betterment. Satisfactory progress has been made in the formation of Radio Rural Forum.

The Directorate maintains a Tourist Hostel at Panaji, a Tourist Resort at Calangute, Tourist cottages at Colva, Ponda and a dormitory at Calangute for the convenience of tourists. It also maintains picnic spots such as Dona Paula, Maem Lake, Bondla Forest Complex, etc. It maintains luxury buses for conducted sight-seeing tours, speed boats and dinghies for pleasure cruises, etc.

A number of roads of touristic importance have been improved and the main beaches of Gaspar Dias, Calangute, Colva and Baina have

been beautified. Similarly, the beautification programme of Miramar-Campal zone and the Children's Park has been completed.

The Department has its own Film Unit to screen film shows throughout the territory so that wide publicity is given to the development and achievements of the country in general and the territory in particular. In order to popularise this territory, literature on various fields of development is produced and prestige advertisements are released. With a view to reviving and maintaining the Goan culture, cultural programmes are organised and important festivities such as Shigmo, Carnival, etc., are given due credit in a matter of celebrations.

The department has been recently bifurcated into two wings namely: (1) Department of Information and Public Relations and (2) Department of Tourism.

CAPTAIN OF PORTS AND RIVER NAVIGATION DEPARTMENT

Primarily, the functions of the Captaincy of Ports was entrusted to an old department known as 'Arsenal of Goa' besides the duties the department had to perform. This set up was laid down by *Portaria* (Order) dated February 1, 1853. Functioning in dual capacity resulted in the negligence in respect of the duties pertaining to the Captaincy of Ports, thereby causing loss to trade and to public revenue. Consequently, these two services were separated by the Order dated June 4, 185o. In these regulations it was laid down that the Office of the Captaincy of Ports should be at Sinquerim, Aguada Fort. The duties allotted to the department at that time were the registration of vessels and Marine Police and to give immediate assistance to all the vessels crossing the Aguada Bar or anchored at the Port whenever assistance was demanded. Subsequently, however, the Department of Captaincy of Ports of Goa was abolished and its functions were transferred partly to the Secretariat and partly to the staff of the Aguada Port. Finding that this arrangement could not work, the department was re-established by the Order dated January 4, 1878.

By order No. 334, dated 7th June 1883, was created the Office of the Deputy Captain of Ports at Mormugao. The creation of this sub-office was justified due to the evergrowing importance of the Mormugao Port after the construction of the railway. It was, therefore, necessary that Marine Police duties and other duties be carried out at that Port.

By Decree dated 1st September, 1887, the Head Office of the Department was transferred to Mormugao and the Office of the Deputy Captain of Ports to Sinquerim.

The first regulations of the Captaincy of the Mormugao Port were approved by Decree, dated 23rd November, 1893, which were subsequently altered by various diplomas.

The Order No. 229, dated 5th April, 1898, laid down that the Department should be redesignated as 'Capitanias dos Portos do Estado da India Portuguesa' (Captaincy of the Port of the Portuguese Indian State).

The 'Regulamento da Capitania dos Portos' was the main statutory law containing rules and regulations governing the Department. 'Regulamento da Capitania dos Portos' was approved by the Decree, dated 9th November, 1912. The headquarters of the Department was transferred to Panaji by Decree No. 35320, dated 12th December, 1946.

The regulations of the Captain of Ports Department approved by Decree, dated 9th November, 1912, conferred on the department an extensive area of jurisdiction comprising all coasts, ports, bays, rivers, creeks and canals in the district within the limits determined by the line of the high mark of the spring tides and that of territorial waters.

The duties of the Department were as follows :—

1. Registration and survey of coastal vessels, fishing vessels and river crafts.
2. Licensing of fishing boats.
3. Conservancy of minor ports and inland waterways.
4. Marine Police.
5. Examinations and issue of certificates for the personnel employed on coastal and inland vessels.
6. Regulation of the use of the seashore and foreshore of all waterways.
7. Administration and operation of lighthouses in the district.

The Department controlled five minor ports of Tiracol, Chapora, Panaji, Betul and Talpona.

At each of these minor ports there was an outpost with personnel attached to assist the Captain of Ports to carry out the duties pertaining to the Department.

The traffic and trade at the these ports was controlled and checked by collecting taxes as wharfage, tonnage, quay dues and granting of port clearances. Checking was also being done on licensing of vessels.

Until 1951-52, the inland traffic was restricted to sailing vessels, country crafts and a small number of passenger launches.

In 1951-52, iron and manganese ore trade started in the district on a substantive scale. The Captain of Ports Department was called upon to help to build the incipient industry and raise it to its present large proportions.

The most important function of the Department was the Maritime Police. The duties of the Marine Police were checking the registration, survey and licensing of vessels, the qualifications of crews, location of fishing-stakes and lights displayed by them, licences of fishing boats and nets, licences for construction in the Maritime Land, extraction of sand, usurpation of maritime land, number of passengers carried within or in excess of their capacity and introduction of saline water in fields for illegal fishing, etc.

Any such illegal cases of infringement of rules and regulations were reported to the Captain of Ports for imposition of penalities or fines as laid down under the Regulations.

All cases of violation of the rules of the sea collisions and damages were dealt with by the Captain of Ports who had powers to settle the disputes and impose penalties upon the crew.

The then Captain of Ports was the President of the Maritime Tribunal with powers to decide all cases which fell within the purview of the Penal Code of Mercantile Marine.

At the Mormugao Harbour. the Captain of Ports or his Deputy, besides all other duties mentioned earlier, had to check the load-lines for sea going vessels, regulate the priorities for allotment of berths and sites for anchorage to the ships.

After Liberation, on the 10th July 1963, the Merchant Shipping Act, 1959, was brought into force in the district and at the same time the posts of Captain of Ports, Panji, and Deputy Port Captain Mormugao were taken over by the Surveyor-in-charge, Merchantile Marine Department, Mormugao.

Under the old regime there were no specific rules set up for the survey of barges. The annual licences were issued without any inspection of hull, machinery and equipment, with the result that the condition of the fleet of ore carrying barges was deteriorating every year. After Liberation, it was felt that if unchecked, this fleet of barges, which is vital for export of ore, would become scrap within a short time.

In this context, the Inland Steam Vessels Act, 1917, was brought into force in the district, and Survey Rules under the said Act were framed and promulgated with effect from September 1, 1965. The Survey of Barges by the Surveyors of the Mercantile Marine Department ensured proper inspection and maintenance. This has resulted in the revival of the barge fleet thus increasing the ore export.

All barges were thereafter registered and surveyed under the Inland Steam Vessels Act, 1917. Simultaneously instructions for guidance of Surveyors were also issued to make the owners, ship-builders and others

concerned aware of the procedure to be adopted for surveys and conditions under which Certificates of Survey are to be issued.

With effect from September 1, 1965, rules were promulgated for the grant of Certificates of Service to masters, sarangs, drivers and engineers of Inland Mechanised vessels and rules to regulate the registration of inland power-driven vessels.

Rules were also issued relating to the examinations for certificates of Competency for master, sarang, driver and engineer under the Inland Steam Vessels Act, 1917. These rules came into force from March 15, 1966.

The impact of the application of the Inland Steam Vessel Act, 1917, and the rules made thereunder on the maintenance and operation of the barges need hardly be emphasised since 80 per cent of the local ore exported through Mormugao Harbour is transported through the inland waterways by over 300 mechanised barges.

The existing jetty at Panaji port was strengthened and extended. A new jetty was constructed at Panaji near the Mandovi bridge for sailing vessels and country crafts. A shed for passengers was also constructed at the jetty at Panaji.

The leading lights to Panaji port, Tejo, Reis Magos and Malim Lighthouses have been modernised with new structures. The Campal Lighthouse has been reconstructed. Similarly, the approach road to Aguada beacon and electrification of this lighthouse has been completed.

Extension work of construction of a wall at Caranzalem has been carried out. Major repairs to the Dona Paula jetty in the district have also been completed. Additional ramps at Betim, Agasaim and Cortalim have been constructed. Similarly construction of ramps each at Querim, Tiracol, Camurlim and Tuem are in progress.

In the Mapusa river, five new jetties with their respective approach roads and one ramp have been constructed.

On the Mandovi river five new ramps and one jetty have been constructed and four ramps and one jetty reconstructed. Two new ramps have been constructed at the Chapora river.

Repairs were carried out to most of the old jetties and ramps. To meet the ever increasing passenger traffic in the waterways, four new ferry boats were constructed and an old launch fitted with a new engine. Major repairs were carried out to two existing ferry boats to make them serviceable.

Hydrographic survey of Inland Waterways is still in progress. Survey of the Mandovi river till its upper stretches, navigable by ore-

carrying barges, has been completed. The hydrographic survey of the Zuari river is in progress.

The scheme of widening and deepening the Cumbarjua canal is a centrally sponsored scheme and as such plans were drawn by the technical committee appointed by the Government of India. The estimated outlay of the scheme is to the tune of Rs. 1,61,44,000·00.

After the completion of the scheme, the canal would be navigable at all tides by barges with a tonnage of as much as 1,000. Similarly, the building for the Maritime School has been constructed in the year 1972. The school caters for refresher courses for personnel holding Certificate of Service and prepares candidates to appear for Certificate of Competency under the Inland Steam Vessels Act, 1917.

OFFICE OF THE CHIEF ELECTORAL OFFICER

The office of the Chief Electoral Officer, with headquarters at Panaji, came into existence in the district with effect from August 13, 1963, with the nomination of the Development Commissioner and Secretary to the Lieutenant Governor as the Chief Electoral Officer by the Election Commission of India As in the rest of the country, the Chief Electoral Officer functions directly under the instructions of the Election Commission of India, New Delhi.

Organisation and Functions

The office is headed by the Chief Electoral Officer. At the headquarters, the office is manned by one superintendent, two Assistants and the necessary ministerial staff; at the district level it is manned by an Aval Karkun in the Collectorate of the district; at sub-divisional level for North and South sub-division, it is manned by an Aval Karkun, and at taluka level, it is manned by one Lower Division Clerk in all the eleven talukas in the district.

The main functions of the office of the Chief Electoral Officer are :—

(1) preparing and revising electoral rolls; and

(2) conducting elections to the Legislative Assembly of Goa, Daman and Diu and the House of the People. The preparation and revision of electoral rolls is done under the supervision of the District Deputy Collector. He is assisted by the Mamlatdars who are designated as Assistant Electoral Registration Officers. For conduct of elections to the House of the People, the District Collector is appointed by the Election Commission of India as the Returning Officer for the two parliamentary constituencies in the district and the two District Deputy Collectors are appointed as Assistant Returning Officers by the Election Commission of India in respect of the parts of the Constituencies coming under their respective

jurisdiction. Similarly, for conduct of elections to the Legislative Assembly of Goa, Daman and Diu, the two District Deputy Collectors are appointed by the Election Commission of India as Returning Officer and all the Mamlatdars in the district are appointed as Assistant Returning Officers for the Assembly Constituencies coming under their respective jurisdictions.

The two Parliamentary constituencies as well as the 30 Assembly Constituencies in the Union Territory of Goa, Daman and Diu were delimited afresh by the Delimitation Commission of India, New Delhi, under the Delimitation Act, 1972[1] on the basis of the population as per the Census of 1971. The revision of electoral rolls of the newly delimited assembly constituency with January 1, 1975 as the qualifying date was undertaken from January 1, 1975.

The office of the Chief Electoral Officer has also been entrusted with the conduct of Panchayat elections in the district. There are 180 Village Panchayats in the district. The second General Election in the district covering 180 Village Panchayats was held on February 28, 1968. It has also been decided by the Government that the machinery under the Chief Electoral Officer should be available to the Director of Municipal Administration for carrying out the election work of the municipalities.

INDUSTRIAL DEVELOPMENT CORPORATION

Establishment

The Goa, Daman and Diu Industrial Development Corporation was set up on February 1, 1966, with a view to expediting the development of Industries and managing industrial estates and industrial areas, etc. It was set up under the Goa, Daman and Diu Industrial Development Act, 1965.

Functions

The Goa, Daman and Diu Industrial Development Act, 1965, specified that for the purpose of securing and assisting in the rapid and orderly establishment and organisation of industries in industrial areas and industrial estates in the district, there shall be established by the State Government by notification in the *Official Gazette*, a Corporation and also the said Corporation shall be a body separate with perpetual succession and a common seal and may sue and be sued in its corporate name, and shall be competent to acquire, hold and dispose off property both moveable and immoveable and to contract, and to all things necessary for the purpose of this Act.

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[1]Vide Official Gazette (Extraordinary) Series I, No. 4, dated April 27, 1974.

The Act also specified the functions of the Goa, Daman and Diu Industrial Development Corporation which shall be :—

(1) generally to promote and assist in the rapid and orderly establishment, growth and development of industries in the Union Territory of Goa, Daman and Diu.

(2) in particular, and without prejudice to the generality of clause (1), to—

(*a*) establish and manage industrial estates at places selected by the State Government;

(*b*) develop industrial areas selected by the State Government for the purpose and make them available for undertakings to establish themselves;

(*c*) assist financially by loans, industries to move their factories into such estates or areas;

(*d*) undertake schemes or works, either jointly with other bodies or institutions, or with Government or local authorities, or on an *agency* basis, in furtherance of the purposes for which the Corporation is established and all matters connected therewith.

Contribution

The Corporation has already established an industrial estate at Corlim where there are 34 sheds. The Estate has arrangements for water supply and electricity and has good communication facilities. The estate which was completed in 1967 is now functioning regularly. All the 34 sheds have been allotted and most of them are working. The plans are afoot to build a few more sheds in the available area.

Another estate at St. Jose de Areal about 9 kilometers away from Margao on the Margao-Quepem road has been established with 30 sheds of different types. All these sheds have been allotted. The Corporation has already taken up the works relating to the setting of industrial estates at Sancoale and 11 sheds of Super 'A' type have recently been completed. Works relating to the Mapusa Industrial Estate is in progress.

Besides the establishment of industrial estates, the Corporation participated in the equity capital of the Sanjivani Bagayatdar Sahakari Sanstha Ltd., and the Sanjivani Sahakari Sakhar Karkhana Ltd., to the extent of Rs. 3,30,000·00 and Rs. 5,00,000·00 respectively.

OFFICE OF THE CUSTODIAN OF EVACUEE PROPERTY

After the Liberation of the district in December 1961, by the Government of India, the problem arose regarding the evacuee property. The organisation of the Custodian of Evacuee Property was therefore started as early as 1963. However, sanction for various posts

in the Office of the Custodian of Evacuee Property was granted by the Ministry of Rehabilitation, Government of India, in February, 1966. The office, as is closely brought out by the name, is headed by the Custodian of Evacuee Property with the headquarters at Panaji.

Functions

The functions of this Office are, in brief, to examine the cases of persons who left the district and to declare them as evacuee or otherwise. The department is also entrusted with the administration of the evacuee properties so undertaken and their disposal in accordance with the law. The activities of the Office are governed under the provisions contained in the Goa, Daman and Diu Administration of Evacuee Property Act, 1964, and the Goa, Daman and Diu Administration of Evacuee Property Rules, 1965.

Contribution

As on March 31, 1974, 3,498 persons were reported to be foreign nationals and their cases were to be decided in accordance with the provisions contained in the Act and Rules mentioned above. Of these, 167 cases have been found to be evacuees within the meaning of the Act.

Eighty-one properties have been declared as evacuee properties. Valuations in respect of these properties have been fixed at Rs. 1,58,02,186·00 approximately. In accordance with the provisions contained in the Act, 10 per cent of the income realised from these properties annually is deposited to the Government as Administration charges.

GOA, DAMAN AND DIU HOUSING BOARD

The establishment of housing boards in different States of the country is a recent phenomenon, a direct resultant of the change in the concept of Government. Prior to Independence and Liberation, the concept of Government whirled around protection of person and property. With Independence and Liberation, the Government had to shoulder the responsibilities for the welfare of the subjects, an aspect that could not be expected of alien rulers like the English, the French and the Portuguese. In the district, the housing activity was undertaken though on a small scale, by the Housing Wing of the 'Junta do Comercio Externo.'

The Housing Board for the district of Goa, came to be established with the enactment of the Goa, Daman and Diu Housing Board Act. A Bill to provide for the setting up of a Statutory Housing Board with a view to taking up an ambitious programme of providing rural and

industrial housing and residential accommodation, necessitated because of acute shortage of accommodation and the growing development in the district, was introduced in the Legislative Assembly of Goa, Daman and Diu by the Government on August 8, 1967. The Bill was approved by the legislature on December 29, 1967. The President of India gave his assent to the Bill on September 18, 1968. The Act was made applicable to the district with effect from January 26, 1969. The Housing Board started functioning from March 20, 1969.

The Housing Board is composed of eight members including the Chairman, all nominated by the Government. The term of office of the Chairman and members is for three years.

The Year 1969-70, being the initial period of its functioning, the Board had no source of income except grants and loans from the Government and other agencies like Life Insurance Corporation of India, scheduled banks, etc. During the first year of its Constitution, the Board was given a grant of Rs. 1,50,000·00 for meeting expenditure in connection with the setting up of its office. The Planning Commission has approved an outlay of Rs. 85,00,000·00 for the Housing Board for the Fourth Five Year Plan Period, Rs. 28,00,000·00 being for Land Acquisition and Development, Rs. 18,00,000·00 for Low Income Group Housing, Rs. 12,00,000·00 for Middle Income Group Housing and Rs. 25,00,000·00 for Slum Clearance and Rs. 2,00,000·00 for Industrial Housing Scheme.

Under the scheme of land acquisition and development, it is proposed to acquire and develop land in bulk by providing all amenities such as asphalted roads, water and electricity lines. Developed land would then be either sold to prospective buyers or utilized for construction of houses under various other schemes by the Board. Proposed outlay for this scheme will be of Rs. 2,00,000·00 for the Fourth Five Year Plan Period, targets being the acquisition of 50 hectares of land and development of 10 hectares of land.

Under the Low Income Group Housing scheme, the board proposes to construct tenements on hire purchase as well as rental schemes. Each tenement will cost about Rs. 10,000·00. It is proposed to build 180 tenements and the outlay for this scheme will be of Rs. 18,00,000·00 for the Fourth Five Year Plan Period.

The Middle Income Group Housing Scheme envisages construction of tenements for middle income group on hire-purchase as well as rental basis. Main emphasis will be laid on hire purchase scheme, as in this case 1/5 of the initial investment will be immediately realised from the purchases, the risk of default being comparatively less. it is proposed to construct about 80 tenements at an estimated cost of Rs. 12,00,000·00 during the Fourth Five Year Plan Period.

Under the Slum Clearance Scheme, it is proposed to construct about 250 tenements for rehabilitation of those persons who presently stay in slums and which are proposed to be demolished. To start with, it has been decided to take up the town of Vasco-da-Gama where the influx of slum dwellers is the most. A scheme has been prepared by the Town Planning Department on Vadem Plateau which when completed will have 800 tenements. The estimated cost of this Vadem scheme is about Rs. 57,00,000·00. Proposed outlay for this scheme for the Fourth Five Year Plan period will be of Rs. 25,00,000·00

Simultaneously, the Government of Goa, Daman and Diu have approached the Housing and Urban Development Corporation, New Delhi to grant a loan of Rs. 50,00,000·00 for its Housing Schemes at Margao and Mapusa under the Revolving fund. However, a sum of Rs. 5,40,000·00 only has been sanctioned.

With a view to implement various schemes in the Fifth-Five Year Plan, the Planning Commission has approved an outlay of Rs. 2,00,00,000·00 for housing, the break-up being as follows :—

	Rs.
(1) Lower Income Group	35,00,000·00
(2) Middle Income Group	40,00,000·00
(3) Slum Clearance	25,00,000·00
(4) Subsidized Industrial Housing ...	5,00,000·00
(5) Village Housing	20,00,000·00
(6) Provision of site to Rural landless labour	25,00,000·00
(7) Land Acquisition and Development ...	50,00,000·00

* * *

CHAPTER 14—LOCAL SELF GOVERNMENT

INTRODUCTION

Local Self Government in the district is conducted by various statutory bodies such as the municipalities and the gram panchayats. The ancient institution of *Comunidades* also played a vital role in this regard during the olden days. Besides Municipalities, gram panchayats and comunidades, there is one more self-governing unit in the district and that is the Port Trust. In addition, information in respect of Town and Country Planning Department is also given in this chapter.

HISTORY OF LOCAL SELF-GOVERNMENT

The municipalities in the Union Territory of Goa, Daman and Diu have their origin in the 16th century. The Senate of Goa (Senado de Goa), the first municipality in the district was founded by Afonso de Albuquerque in April 1511. The Chamber, that is, 'Camara', was then composed of one 'Fidalgo', two Noblemen (Nobres), two ordinary judges, a representative of the City, (procurador da Cidade), and four representatives of Works' Guilds (Mestres). They were probably selected from among the white men whom Albuquerque had encouraged to marry Indian women (casados), and to settle in Goa. The Royal 'Alvara' bestowing the City of Goa several privileges was promulgated on March 2, 1518. The married Portuguese citizens of Goa (casados) were allowed freedom of trade both for themselves, their associates, their slaves and factors in all provisions of goods whether of European or Asian origin. The monopoly of spices and other selected merchandise was reserved by the Crown. All the municipal offices were reserved for married Portuguese and their descendants. The viceroy could not interfere with day to day administration of the 'Camara' and the privileges of the Portuguese citizens of Goa were to be scrupulously respected. The 'Camara' of Goa was equated in rank with that of the municipality of Lisbon. By the provision of 1755, a number of representatives of the House of Twenty-nine Guilds (Casa Vinte-e-nove) was determined. In 1816, instead of two separate city Judges for Tiswadi and Bardez, only one magistrate was continued at Goa.

Some changes in the internal administration of these 'Camaras' were introduced in 1832. As laid down under the constitution of 1822, the Senate was replaced by 'Camara Municipal de Goa'. Under the Provisional Government, Municipality was substituted by Committee in 1835, but was again re-established as 'Camara Municipal' in 1836.

According to the Administration, Code of 1842, the 'Camara' was composed of seven members (Vereadors). This number was further raised to nine by the Charter of 1917. According to the enactment dated January 15, 1774. 'Senados de Camara' were established in Salcete and Bardez talukas. They were discontinued in 1778 but were re-established in 1783. They were substituted by 'Camaras' Municipalities under the Constitution of 1822. Margoa, the headquarters of the taluka of Salcete, was raised to the category of 'villa' in 1778. It was followed by Mapusa in Bardez taluka in 1808.

Municipal Committees were first established in Pernem, Sanquelim and Ponda talukas in 1880. In the taluka of Sanguem there were 'Camaras Agrarias' located in its sub-divisions at Hemadbarshe and Astragar, before the establishment of a Municipal Committee at Sangeum in 1880. In Quepem, a municipality was established in 1880 replacing 'Camara Geral' which functioned there since 1849[1]. Prior to the liberation of the territory there were 11 municipalities in the district covering all the talukas in the district. The jurisdiction of these municipalities extended over the entire taluka. They were maintained from their own resources built up by way of taxation and Government grants which were in proportion to the taxes levied by them on selected items. These grants were meant to meet the expenditure of the development schemes of the municipal area.

The legislation called the 'Reforma Administrativo Ultra Marino' which was a uniform legislation covering not only Goa but also other Portuguese colonies, regulated the working and functioning of the municipalities during the pre-liberation period and also in the post liberation period till the enforcement of the Goa, Daman and Diu Municipalities Act, 1968.

MUNICIPALITIES

With the enforcement of the Goa, Daman and Diu Municipalities Act, 1968, the old pre-liberation legislation was repealed and the jurisdiction of the Municipal area which earlier was covering the entire taluka was restricted only to the urban area. The first step taken by the Government after the enforcement of this Act was to hold general elections for constitution of the Municipal Councils with duly elected representatives of the urban area.

There were in all 11 municipalities in the district located at Bicholim, Chauri, Mapusa, Margao, Vasco-da-Gama, Panaji, Pernem, Quepem, Ponda, Sanguem and Valpoi. At present, however, there are only 7 municipalities in the district and they are located at Bicholim, Mapusa,

[1] Gune V. T., "An Outline of the Administrative Institutions of the Portuguese territories in India and the growth of their Central Archives at Goa 16th to 19th century A. D." in *Studies in Indian History* (Dr. A. G. Pawar Felicitation Volume) Kolhapur 1968, pp. 69-70.

Margao, Vasco-da-Gama, Panaji, Ponda and Sanguem. The remaining 4 municipalities namely Chauri, Pernem, Quepem and Valpoi have been abolished and given the status of Nagar Panchayats.[1]

A municipal area with a population of more than fifty thousand has been classified as A Class, that with a population of ten thousand to fifty thousand as B Class and that with a population of less than ten thousand as C Class. In B Class are included Municipal Councils of Panaji, Vasco-da-Gama, Margao and Mapusa, while the remaining Municipal Councils are included under Class C. The Municipalities in the district are covered under the Goa, Daman and Diu Municipalities Act, 1968.

The Municipalities in the district of Goa or for that matter, in the entire territory are under the control of the Director of Municipal Administration. The term of office of the Municipality is for a period of five years which can be extended by the Government in exceptional circumstances by modification in the Official Gazette to a term not exceeding in aggregate, six months for reasons which should be stated in such notifications. It has been stipulated under the Act that every municipal council should have a President and Vice-President who are elected from among the councillors who in their turn are elected or deemed to be elected. The term of office of the President and the Vice-President is co-terminus with that of the term of the elected councillors. The main duties of the President of the Municipality are to preside at all the meetings of the Council and regulate and conduct all business at such meetings; to watch over the financial and executive administration of the Council; to exercise supervision and control over the acts and proceedings of all officers and servants of the municipality. He may, in cases of emergency, direct the execution or stoppage of any work or the doing of any act which requires the sanction of the Council and immediate execution and doing of which is, in his opinion, necessary for the service or safety of the public, and may direct that the expenses for doing such work or doing such act shall be made from the Municipal fund under certain provisions.

The Act divides Municipal functions into obligatory and discretionary—the former includes all matters essential to the well-being of the civil population while the latter covers those which despite legitimate local expenditure, are not considered absolutely essential.

The following tables give information in respect of income and expenditure of municipal councils, talukawise, in the year 1970-71 in the district of Goa.

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[1] *Vide* Notification published in the Extraordinary Gazette, Series II, No. 12, dated the 22nd June 1976.

TABLE No. 1.— INCOME OF MUNICIPAL COUNCILS (1970-71)

(Rs. in thousand)

District/Taluka/ Municipal Council	Octroi	I—Municipal rates and taxes			II Other sources				Total I + II	Income from extra-ordinary receipts and debts
		Taxes on houses and lands	Other taxes and duties	Total I	Receipts from markets and slaughter houses	Government grants	Miscellaneous	Total II		
1	2	3	4	5	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Municipalities in Goa District..	..	48.89	9,60.90	10,09.79	5,28.30	28,49.14	21.40	33,98.84	44,08.63	16,14.97
Panaji ..	..	..	3,07.04	3,07.04	1,16.00	7,72.42	..	8,88.42	11,95.46	6.54
Margao ..	..	..	2,12.74	2,12.74	2,23.82	6,26.68	..	8,50.50	10,63.24	73.35
Mapusa	..	5.36	84.79	90.15	..	3,96.26	..	3,96.26	4,86.41	..
Mormugao ..	..	10.97	2,59.63	2,70.60	1,72.89	2,37.04	4.77	4,14.70	6,85.30	15,26.60
Ponda	..	..	70.79	70.79	8.10	1,36.20	3.52	1,47.82	2,18.61	7.98
Bicholim ..	..	..	..	..	..	1,04.92	..	1,04.92	1,04.92	..
Pernem ..	..	..	6.59	6.59	7.08	1,05.82	0.01	1,12.91	1,19.50	..
Quepem	..	..	1.72	1.72	..	72.10	1.32	73.42	75.14	..
Sanguem	..	31.04	15.71	46.75	..	1,85.21	..	1,85.21	2,31.96	..
Canacona	..	..	0.13	0.13	..	75.42	11.78	87.20	87.33	..
Satari	..	1.52	1.76	3.28	0.41	1,37.07	..	1,37.48	1,40.76	0.50

TABLE No. 2.—EXPENDITURE OF MUNICIPAL COUNCILS 1970-71

(Figures in thousand Rs.)

District/Municipal Councils	Current Expenditure						Extraordinary expenditure and debts
	Public lighting	Water supply	Drainage, conservancy and sanitary	Hospital, dispensaries and vaccination	Miscellaneous	Total	
Municipalities in Goa district	8,73·00	34·22	7,61·57	9,40.76	5,21·42	24,71·72	30·90
Panaji	50·00	....	3,23·11	3,23.11	23·36	7,18·99	2·77
Margao	83·21	6·98	10·51	1,69.36	1,25·55	6,02·81	....
Mapusa	39·18	2·75	2,43·39	1,88.93	2,84·43	8,01·36	....
Mormugao	6,18·75	2·57	1,04·07	1,45.06	....	....	....
Ponda	22·19	0·24	16·70	23.13	55·13	94·26	17·12
Bicholim	14·21	....	41·04	38.28	....	93·52	11·01
Pernem	12·68	8·26	11·84	14.45	11·51	58·74	....
Quepem	15·42	....	6·79	8.86	5·87	32·87	....
Sanguem	10·53	10·42	4·02	18.02	15·57	58·56	....
Canacona	2·44	....	0·10	5.26	....	2·54	....
Satari	4·39	3·00	....	6.30	....	8·07	....

TOWN AND COUNTRY PLANNING DEPARTMENT

The need was felt to channelise and control the development of urban and rural areas of the district due to the tremendous spurt in their development after liberation. The Town and Country Planning Department was therefore created at the end of the fourth year of the Third Five-Year Plan in December 1964. The department is headed by the Senior Town Planner.

Functions

The department was established with a view to preparing the regional plan of Goa and master plans for the towns of Panaji, Vasco-da-Gama, Margao, Ponda and Mapusa. For each, a cent per cent assistance was given by the Government of India.

The existing legislation which was quite inadequate for the purpose, had to be strengthened by introducing the Building Bye-Laws and Zoning Regulations, 1965. The advantage was also taken of the Removal of Difficulties Order, 1962. Jurisdiction of these bye-laws and regulations extended over the taluka headquarters which were urban in character, and certain selected villages, mostly around the taluka headquarters, which were showing signs of developing an urban character.

The Town Planning Committee was constituted with the Senior Town Planner as Member-Secretary in order to perform functions and discharge duties required in this Order. The department had to undertake the work of planning guides to Municipalities for the proper development of the town as some of the local Municipalities had no qualified Engineers or Town Planners. With this in view, various surveys such as land use, structural condition of buildings, etc. were carried out for the important urban centres for which Zoning plans were prepared. The Zoning plans for Panaji, Margao, Ponda, Valpoi and Pernem, were placed before and got approved by the Town Planning Committee in 1968-69. The Town Planning Committee subsequently approved the Zoning Plans for Mapusa, Bicholim, Quepem, Sanguem, Vasco-da-Gama and Chaudi. Besides these urban areas, Zoning Plans were also prepared for Taleigao, Caranzalem, Curchorem, Sanvordem complex and Porvorim.

The basic difficulty experienced in this regard was the lack of proper survey maps, cadastral and topographical, to the suitable scales for the preparation of Zoning Plans. A Survey Unit was therefore established based on the recommendations of the Government of India in 1956, to assist the department in survey work by bringing survey maps up-to-date.

In addition to the preparation of Zoning Plans and printing guides to proper development of towns, the department prepared

a number of schemes as detailed below, for the development of tourism :—

Colva Beach Development ;
Development near Aguada Fort ;
Terrace Garden in Mapusa ;
Miramar Beach Development ;
Calangute Beach Development ;
Miramar Road beautification ;
Cortalim ferry point beautification ;
Mandovi approach road schemes ;
Electrification of Mandovi Bridge ;
Landscaping scheme for Goa Medical College ;

Improvement of various intersections, car parking schemes at Calangute, etc.

Proposed bus Terminus at Panaji, approach road to proposed Zuari Bridge towards Cortalim, Housing Scheme for Vasco-da-Gama, Municipality ;

Preparation of road classification map in collaboration with P.W.D. ;

Slum clearance scheme for Calicut Road, Panaji and Baina and Vasco da-Gama ;

Lay-out for the miners town established at Ambegal village ;

Fishing village scheme at Colvale.

VILLAGE PANCHAYATS

Soon after the Liberation of the territory, the structure of Government underwent a gradual change and the formation of village panchayats became an absolute necessity with a view to running a smooth administration on democratic pattern. With this in view an Act called the Goa, Daman and Diu Village Panchayat Regulation 1962, was passed. This regulation provides for powers and duties for panchayats. This Act envisages development of rural areas and transfer of power to the people. In the district of Goa there are at present, 180 village panchayats.

The Maximum number of members for a panchayat is 9 and the minimum is 5. One seat is reserved for women in every village panchayat. The term of office of the village panchayat is for a period of 4 years which can be extended for a period not extending one year by the Government.

The Gram Sabha is a general body of the Gram Panchayat and consists of all the local voters. Gram Sabha is required to meet at least twice every year. The main items of works allocated to the Gram Sabha are the consideration of the annual statements of accounts, report on the administration of the proceeding financial year, development and other programmes of work proposed for the current financial year, last audit report and replies made thereto, proposal for fresh and enhanced taxation,

proposals for organising community services, etc. The Sarpanch is to preside at the meeting of the Gram Sabha.

The main sources of income of Panchayats are :—House tax, vehicle tax (other than mechanically propelled vehicles), lighting tax, professional tax, octroi, tax on fairs, drainage tax, pilgrim tax, entertainment tax, fees for sale of goods in market, melas, fairs, fees for grazing of cattle, fees on cart stands, fees for providing watch and ward of crops in the village, fees for plying of ferry, etc.

The Panchayats are also entrusted with sanitation and public health, the registration of births, and deaths, social welfare, education, removal of refuse, cleanliness, supply of water for domestic use, construction of houses, hospitals and dispensaries, maternity and child welfare, establishment of health institution for poor children, family planning, provision, maintenance and regulation of burning grounds, burial grounds, regulation by licensing or otherwise of tea, coffee and milk shops and other shops where eatables are served, construction and maintenance of public latrines, regulating, checking and abating of offensive or dangerous trade of practice, construction, repairs and maintenance of village roads, drains, bridges, etc. lighting villages and planting of trees, establishment and maintenance of markets, slaughter houses and other works of public utility, establishment, maintenance and regulation of fairs, construction, maintenance and control of tanga stands, cart stands, bathing and washing gates, cattle pounds, extension of village sites and the regulation of buildings and housing schemes in accordance with such principles as are prescribed.

The Panchayats are also entrusted with preparation and implementation of the plans for the development of village, including the development of agriculture, animal husbandry, fisheries, village industries, co-operations, and especial production and distribution of improved seeds, manure and fertilizers, promoting the use of improved agricultural implements and making such implements easily available, minor irrigation, construction and maintenance of field channels, lift irrigation, digging of wells, drinking water wells and tanks, etc., raising, preservation and improvement of village forests, pasture and orchards, improvement of cattle and cattle breeding and general care of livestock, providing for organisation, management and development of cottage industries and small scale industries, especially on a co-operative basis, promotion of co-operative farming, etc.

The Panchayats are also to deal with the administration of common property, registration of deaths and births, marriages in such manner and in such forms as is prescribed in the Rules, numbering and premises, preparation, maintenance and upkeep of panchayat records.

The Panchayats are also empowered to deal with the social relief to the crippled and destitute, construction of low rent houses to the families

with the yearly income below on thousand rupees, relief measures in the time of the public calamity, promotion of moral and social welfare activities and encouraging and assisting the voluntary organisation and other agencies engaged in such activities.

As far as education is concerned the Panchayats are empowered to deal with promotion of primary education and assistance in improving primary schools, establishment and maintenance of parks, clubs, *akhadas* and other places of recreation for villagers including women and children, establishment and maintenance of libraries and reading rooms, etc.

The Government have appointed one village Panchayat Secretary in each Panchayat in order to carry out the panchayat work. He is entrusted with the work of collection of taxes, maintenance of all the registers and other day-to-day works. In order to get the work done properly through the Secretaries, they are being trained at Government cost in the Ela Farm at Old Goa in the various development works. In the year 1970-71 about 80 village Panchayat Secretaries had been trained and others will follow suit.

The Secretary is appointed by the Government and his pay and allowances are paid by the Government.

There are many development schemes of Government under which the loans are given to the villagers for the construction of new houses : and improvement for existing ones. The training camps for the Panchayat members are held from time to time in order that the Panchayat members by visiting the adjoining states may get an opportunity to know the functions of Panchayat Raj, in other parts of the country. Under the Remunerative Scheme the loan is given to the Panchayats for the construction of market-*cum*-office buildings, purchase of pump sets, purchase of power, spares, etc. This scheme is proved to be a great success as it contributes in the long run to increase the income of the Panchayats.

Recently the Government have issued an amendment to the Village Panchayat Regulation under which the village Panchayats are empowered to issue licences for the construction in the Panchayat areas. The Government have appointed Assistant Engineers of Public Works-Department as Technical Officers for advising the Panchayat to sanction plans submitted to them and for issue of licence for construction.

The village housing project scheme is implemented in the district since 1968 as per the rules framed by the Government of India under the scheme of loans for the district of new houses or improvement of the existing ones, the estimate cost of which does not exceed Rs. 5.,000.00. Loans under the scheme are granted to the bonafide residents of selected villages.

In the district of Goa there are now 180 village panchayats, of which 125 are individual Panchayats, 55 are group Panchayats. Group gram

panchayats usually cover 2 to 3 villages. The following table gives information in respect of village panchayats talukawise in the district of Goa.

TABLE No. 3.—INFORMATION REGARDING PANCHAYATS IN GOA, TALUKAWISE

Serial No.	Name of the Block	Number of individual Panchayats	Number of group Panchayats	Total number of Panchayats	Number of villages covered in Group Panchayats
1	2	3	4	5	6
1	Panaji	14	4	18	2 of 2 villages. 2 of 3 villages.
2	Bardez	18	12	30	10 of 2 villages. 2 of 3 villages.
3	Pernem	12	6	18	4 of 2 villages. 2 of 3 villages.
4	Bicholim	8	8	16	8 of 2 villages.
5	Satari	11	Nil	11	Nil
6	Ponda	10	9	19	8 of 2 villages. 1 of 3 villages.
7	Margao	25	10	35	9 of 2 villages 1 of 3 villages.
8	Quepem	11	3	14	2 of 2 villages. 1 of 1 village.
9	Sanguem	10	1	11	1 of 2 villages.
10	Canacona	6	2	8	2 of 1 village.

The income of each Gram Panchayat depends upon the resources at its disposal. The following statement lists the Gram Panchayats with highest and lowest incomes block-wise.

Name of the Block	Name of the Village Panchayat of highest income	Name of the Village Panchayat of lowest income
1	2	3
Panaji	Village Panchayat St. Andre	Village Panchayat Cumburjua.
Bardez	Village Panchayat Tivim-Sirsaim	Village Panchayat Pilerne.
Pernem	Village Panchayat Corgao	Village Panchayat Alorna-Ibrampur.
Bicholim	Village Panchayat Pale-Velguem	Village Panchayat Naroa.
Satari	Village Panchayat Pisurle	Village Panchayat Codal.
Ponda	Village Panchayat Ponchavadi	Village Panchayat Volvoi.
Margao	Village Panchayat Raia	Village Panchayat Paroda.
Sanguem	Village Panchayat Colem	Village Panchayat Netorli.
Quepem	Village Panchayat Curchorem	Village Panchayat Cavorem.
Canacona	Village Panchayat Loliem-Polem	Village Panchayat Gaodongrem.

Development Blocks

The Government have constituted a Block Advisory Committee in every Development Block. The functions of the Block Advisory Committee are to advise the administration on planning of miscellaneous schemes, preparation of budget, allocation of schemes and their execution in rural areas. The Committee is composed of—

(1) Member of Parliament from the Union Territory of Goa, Daman and Diu;

(2) Member of Legislative Assembly for the concerned block;

(3) All Sarpanchas in the concerned block;

(4) A local representative of the Bharat Sevak Samaj, to be nominated by the convenor of the Bharat Sevak Samaj;

(5) A local representative of the Swami Vivekananda Society;

(6) A local representative of the All India Women's Council and the project implementing committee wherever available;

(7) Technical officers of the department of Agriculture, Animal Husbandry Services, Education, Public Health, Public Works Department, Co-operatives, Forests, Industries and Fisheries Department;

(8) The Mamlatdar of the taluka;

(9) A representative each of the Scheduled Caste and Scheduled Tribes of the block area to be nominated by the Block Advisory Committee;

(10) A representative nominated by the Goa Unit of the Khadi and Village Industries Association;

(11) A representative type of Co-operative Societies in the block to be nominated by the Registrar of Co-operative Societies in consultation with the Block Development Officer.

The Registrar of Co-operative Societies may also nominate more representatives of certain types of co-operatives existing in the block in consultation with the Block Development Officer.

The Block Advisory Committee is required to meet once in every two months. In the district of Goa there are ten development blocks all in Post Stage II.

The following statement gives the date of establishment of these development blocks:—

Name of the Block	Date of Establishment
Pernem	14th November 1962
Satari	14th November 1962
Sanguem	14th November 1962
Canacona	14th November 1962
Quepem	19th December 1962
Bicholim	19th December 1962
Ponda	18th January 1963
Bardez	25th June 1963
Margao	1st July 1963
Panaji	1st August 1963

The Block Development Officers are the executive officers in respect of these development blocks. They are responsible to the Assistant Director of Panchayats who in turn is responsible to the Collector of the District. The Block Development Officer is assisted by Extension Officers in respect of Agriculture, Village Panchayats-*cum*-Co-operation and Industries, one *mukhya sevika*, ten *gram sevaks* and two *gram sevikas*.

VILLAGE COMMUNITIES (Comunidades)[1]

" The local administration of villages was carried according to ancient system of Village Autonomy in India. This organisation has been referred to in Portuguese correspondence as Gancarias or Gaonkaria, Camara Agraria (Agricultural Community) and Comunidades or Communities. The last one was introduced by the Jesuits. Gavakars were the descendants of the ancient settlers of the villages. The government was vested in the assembly of one or two villages as of Tarf composed of the elders who represented each clan vangar or vangor. Kulkarni kept the records of the village administration. The hereditary officers of the village and the guilds serving the village community were assigned lands by Namus or Namoxim tenure in lieu of their services. The proprietary rights in land were vested in the Village Community as a whole. The profits if any of the Village Community went to Gankar as Jankar or Zonkar or hereditary right holder. Associates or Kulacharins or Acsaokars were given shares as Bhagidars or "Dividends". But they had no say in the administration of the village. Above the village assembly there was Desh or Mahal (Camara Agraria) assembly composed of elders coming from different Villages.

The ancient practice and usages about the administration of villages in Tiswadi or island were codified by a " Foral " by Vedor da Fazenda in 1526 (16th September). As referred to previously Tanadar of a Mahal was just a link between these Communities and Government, whom Government dues or 'Foro' was paid by the Villages through "Camara Agraria". Changes were introduced into the internal administration of the villages in 1735 (15th June) and 1764 (10th December).

Under the Constitutional regime guardianship of the government fees, rights of the Village Communities continued unchanged. During 1880-97, attempts were made to modify the existing arrangements to suit the changed circumstances. In 1899 a Committee was appointed for codifying the existing Laws, afterward it was authorized to make recommendation to ameliorate the village institution. In consequence a

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[1] Gune V. T., " An Outline of the Administrative Institutions of the Portuguese territories in India and the growth of their Central Archives at Goa 16th to 19th Century A.D. " in *Studies in Indian History* (Dr. A. G. Pawar Felicitation Volume) Kolhapur 1968, pp. 68-69.

report on the Village Community Code was prepared in 1904 which was approved by Government in 1908. Enactment was passed in 1954 (June 5) creating rural credit banks and the Village Communities were ordered to have a reserve fund for the agricultural development of lands. By the Law of 1961 (15th April) the entire system was overhauled and new changes were introduced in working of the Communities."

At present, the members of the Comunidades can be classified into three categories *viz.*, (*a*) 'Joneiro' (Zonkar) (*b*) shareholders (acsaokar) and (*c*) participants (gaokars).

The 'Joneiros' are the male descendants of the original 'gaokars' or villagers. A person becomes a 'Joneiro' when he attains a certain age which differs from comunidade to comunidade. The 'joneiro' has a right to receive some amount of the annual income shown by the comunidade. This right is known as 'jono'. When a person registers his name in the comunidade as 'joneiro' he acquires the above right, which is inalienable, personal and imprescriptible.

The 'Shareholders' are those who hold shares of the comunidades. The shares are registered in their own names and are transferable and alienable. They receive a net income known as 'dividend' from the net income for distribution shown by the comunidades.

The 'participants' are those who register their names in the comunidade as the participants. They get a certain amount from the net income shown by the Comunidade. Their number is quite limited.

'Joneiros' and shareholders are found as members of the comunidades in the talukas of Tiswadi, Salcete, Bardez and Mormugao, while the comunidades of Quepem, Canacona, Sanguem and Bicholim mostly have gaokars as members. In the Ponda taluka 'participants' constitute the comunidades. In the Pernem taluka, the comunidades are forfeited i.e. the comunidade members have abandoned their administration or they cannot satisfy their debits.

Each comunidade is administered by an Administrative body consisting of three members viz., the President, the Attorney and the Treasurer. The President is appointed by the Government, whereas the attorney and the treasurer are elected by the Comunidade from among its able members.

Comunidades at the taluka level are directed and managed by an administration of Comunidades. The comunidades in the talukas of Salcete, Mormugao, Quepem, Canacona and Sanguem are under the jurisdiction of the Administrator of Comunidades of Salcete, while the comunidades of Tiswadi and Ponda talukas are under the jurisdiction of the Administrator of comunidades of Tiswadi and those in the talukas

of Bardez, Pernem, Bicholim and Satari under the Administrator of Comunidades of Bardez.

The Director of Civil Administration is the head of the administration of Comunidades in the district.

At present there are 224 comunidades in the district of Goa. Of these 31 are located in Tiswadi, 40 in Salcete, 40 in Bardez, 14 in Mormugao, 28 in Ponda, 21 in Bicholim, 12 in Pernem, 24 in Quepem, 6 each in Sanguem and Canacona and only 2 in Satari.

Taken together these comunidades hold about 36,624 hectares of land of which about 94·6 per cent is held by the comunidades in the talukas of Old Conquests and in the Ponda and Bicholim talukas. Of the above area, an area of 14,968 hectares i.e. 40·8 per cent is covered by paddy plots. Of these paddy fields about 11,236 hectares are cultivated, merely during the monsoon crop season (kharif or sorod), about 478 hectares is dry crop season (rabi or vangan) and about 3,253 hectares both in the vangan and sorod seasons (double crops).

As regards the nature of soil of the paddy fields, it is verified that most of them are of the 'khazan' type (42·6 per cent), 'ker' type (40·7 per cent), the 'morod' type and 'other types of land', covering approximately 4·2 per cent and 12·5 per cent respectively.

Besides the area occupied by paddy fields, the comunidades also hold a reasonable portion of land covered by cashew plantation, constituting approximately 5,506 hectares. The area occupied by coconut plantation is almost insignificant totalling merely to 431 hectares.

In a general way, it can be said that at the time of liberation, the comunidades had deteriorated into stagnant and senile institutions. This led to the enactment known as the Agricultural Tenancy Act 1964, immediately after liberation, with a view to providing security to the tenant cultivators and reducing the crushing burden of rent on them. It also brought to an end absentee landlordism and thus freed the tenant from exploitation. It also established direct relationship between the tenants and the State, in keeping with the national pattern based on modern economic principles suited to the idea of welfare state and socialistic pattern of society.

MORMUGAO PORT TRUST

Historical Background

Mormugao is one of India's earliest modern ports, its first wharf facilities having been built as early as 1888, the year when Bombay's prestige Victoria Dock was constructed, five years before the first Dock system of Calcutta came into being and 25 years before the completion of the Madras Harbour. Though Mormugao could not, for historical and

political reasons, flourish as best as its other counterparts in the many decades that followed, in the course of the last one decade alone, destiny, in the shape of the bountiful discovery of iron ore in Goa and the political liberation of the Territory of Goa, had brought it back to the very fore-front of India's premier ports.

The Port of Mormugao, a fast expanding major Port of India and gateway to a growing industrial complex, is situated on the west coast of India, in the Union Territory of Goa, Daman and Diu in 15°25′ N Latitude and 73°47′ E Longtitude at the mouth of the 'Zuari' river. Goa is endowed by nature with a magnificent and hospitable coastline on the West providing access to two big rivers 'Zuari' and 'Mandovi' with navigable waters. It has its own maritime traditions. The area now known as 'Old Goa', situated on the 'Mandovi', was a flourishing trading centre of the East before the Portuguese came to India. Adil Shah of the Bijapur Dynasty was defeated by Albuquerque in 1510 and this Port of India came under foreign rule. The Portuguese developed the trading centre and fully exploited the initial advantage gained by them in the East.

Old Goa, which had been discarded in favour of 'New Goa' (Panaji) in 1818 could no longer serve as a port for international trade and receive the growing sizes of steamships. It was, thus, left to the British initiative to build a Port for Goa, suiting the changing needs of time.

The West of India Portuguese Guaranteed Railway Company (W.I.P.R.) responsible for building the Port of Mormugao and its connected Railway, owed its origin to the treaty of Lisbon signed in 1878 between the British and the Portuguese Governments. This treaty, *inter alia*, was for the purpose of having a union of commercial interests between India and Goa, so that, as far as trade was concerned, the Port should provide adequate accommodation for all the hinterland trade of the Southern Maratha and other districts of India, and for all such commercial purposes should function in exactly the same manner as an Indian Port or Port of transit. The Port and its connected Railway upto Castle Rock commenced functioning in 1888.

Initially berths No. 1 and 2 together with the breakwater 1,714′ long were built in 1888. Berths No. 3 and 4 together with the mole 885′ long were built in 1917 and berths No. 5 and 6 in the year 1934. A mechanical Ore Loading Plant at berth No. 6 was installed in 1959 by Messrs. Chowgule and Co., the concessionaries of the berth with a rated loading capacity of 600 tonnes per hour, which from 1965 was expanded and improved upto 1,000 tonnes per hour. The lighter berth No. 7 was also built in 1959, as part of the Ore Plant.

In 1902, a working arrangement was arrived at between the Southern Maratha Railway and the West India Portuguese Guaranteed Railway

under which the latter was to be regarded as part of the former and the port of Mormugao to be a Port of transit for Indian Trade. This arrangement continued upto August 1954 when the Southern Maratha Railway ceased to operate traffic between Goa and the rest of the country and worked the railway only between the Port and Sanvordem, within Goa. Consequent on the closure of the India-Goa border, the Southern Railway which had been managing the Port Railway as Sub-Contractors ceased all operations in Goa in December, 1955, and the Administration of the Port of Mormugao and the connected Railway reverted to the Principals W.I.P. Railway Co., with effect from January 1956, the activities being limited to Goa only.

On April 1, 1961, an autonomous body named the 'Junta Autonoma dos Portos e Caminhos de Ferro' took over the Port and Railway Administration from the W.I.P. Railway Co. Soon after this change-over, the long awaited liberation and reunion of Goa with India took place on the 19th December 1961 and the Administration of the Port and its connected Railway was taken over by the Government of India through an Administrative Officer who was appointed by the President of India on 8th Janaury 1962. By an order published in the 'Boletim Official' (Official Gazette), dated 8th February 1962, the Military Governor of Goa, Daman and Diu dissolved the 'Junta Autonoma dos Portos e Caminhos de Ferro do Estado da India'.

The Port of Mormugao like other major ports of India came under direct control of the Government of India, Ministry of Transport, instead of the Local Government of Goa as per the decision arrived at on 7th November 1962 at an Inter-Ministerial meeting held in New Delhi.

In accordance with a decision taken at an Inter-Ministerial meeting held at New Delhi, the main Railway Section from Vasco-da-Gama to the border of Goa was transferred to the Southern Railway with effect from 1st May 1963.

The Indian Ports Act, 1908, was extended to Goa under notification dated the 2nd December 1963, and Mormugao Port was declared a Major Port by the Ministry of Transport. The Major Port Trusts Act, 1963, was made applicable to the Port of Mormugao and a Board of Trustees was constituted with effect from 1st May 1964.

Structure of Port Management and Organisational Set-up

The day-to-day administration of the Port Trust is carried on under the supervision and control of the Chairman. For administrative convenience, the work of the Port Trust is divided among nine departments viz. General Administration department, Traffic department, Engineering (Civil) department, Accounts department, Medical department, Engineering (Mechanical) department, Marine department, Engineering

(Project) department and Planning and Research department. Heads of all these departments are appointed by the Government of India. There are about 2,500 employees working under the Port Trust, under these various departments, excluding about 3,000 Dock Labour employees involved in the cargo-handling operations at the Port coming under the Dock Labour Board. The functions and responsibilities of each department are as under :—

(1) *General Administration Department.*—The General Administration Department is headed by the Secretary.

Functions and Responsibilities.—In addition to being the Secretariat of the Board of Trustees, consisting of 17 members and 1 Chairman, the functions and responsibilities of the department *inter-alia* include :—

(*i*) assistance in formation of direction and policy.

(*ii*) personnel matters.

(*iii*) labour problems.

(*iv*) estate management and codification of leases and other legal documents.

(*v*) security supervision.

(*vi*) Public relations.

(*vii*) Intra, inter and extra departmental co-ordination.

(*viii*) Liaison with the State Government.

(*ix*) Legal matters.

(2) *Traffic Department.*—The Traffic Department is headed by the Traffic Manager.

Functions and Responsibilities.—The Traffic department is responsible for all operations connected with landing, storage, delivery and shipment of goods and documentation relating thereto, embarkation and disembarkation of passengers, control of traffic in the port area, watch and ward and terminal railway operations. The main division of the Traffic Departments are shipping operations, shipping commercial, railway operations, labour and watch and ward.

(3) *Engineering (Civil) Department.*—Chief Engineer is the head of the Engineering (Civil) Department.

Functions and Responsibilities.—The Chief Engineer is mainly responsible for all the Civil Engineering Works, being executed by the Mormugao Port Trust and is in charge of the Engineering (Civil) Department. He is also in charge of the procurement and stocking of all the materials, machinery and spares required by all the departments of the Port Trust. His duties comprise the following :—

(*i*) Maintenance and repairs of the quays, jetties, sheds, buildings, roads, railways, culverts, water supply mains, and drainage lines under the Mormugao Port Trust.

(*ii*) Capital Civil engineering works like the construction of quays, jetties, sheds, buildings, roads, railways, culverts, water supply mains and drainage lines under the Mormugao Port Trust.

(*iii*) Problems relating to the acquisition and use of land for the port outside the customs boundary surrounding the Port.

(*iv*) Preparation of tenders and specifications for Capital dredging work to be carried out by contract including their execution (Maintenance dredging is looked after by the Deputy Conservator of the port).

(*v*) Planning of the development of the harbour including drawing up of development plans in connection with the future developments.

(*vi*) Liaison between the Port Trust and the Consulting Engineers in the case of works for which Consulting Engineers are appointed.

(*vii*) Functioning as the Technical Adviser to the Chairman of the Port Trust in any general matters needing technical opinion.

(*viii*) Functioning as the Controlling Officer and Disciplinary Authority for the employees under the Chief Engineer's Department in terms of the Port Regulations under the Indian Major Ports Act.

(*ix*) Procurement and stocking of all materials, machinery and spares required in connection with all capital and maintenance works including disposing of all such items declared surplus or unserviceable by all departments.

(4) *Accounts Department.*—The Accounts Department is headed by the Financial Adviser and Chief Accounts Officer.

Functions and Responsibilities.—The office of Financial Adviser and Chief Accounts Officer is responsible for the preparation of the Budget Estimates, Investment of surplus funds, Maintenance of Accounts of income and expenditure (including stores accounts), scrutiny of the proposals involving finance, checking of estimates for works, tenders and contracts, issue of port clearance to vessels after verifying that port charges have been paid, fixation of rates, disbursement of salaries and wages, etc. Besides, the Accounts department arrange the Internal Audit of the various departments and carries out periodical verification of stores and inventories. A Costing Cell which has been instituted in this department in October, 1970, conducts detailed cost studies.

(5) *Medical Department.*—The Chief Medical Officer heads the Medical Department.

Functions and Responsibilities.—The Medical department is responsible for medical examination of candidates for service in the Port

Trust and periodical examinations of employees. The periodical medical examination of employees is carried out for vision tests. The department is also responsible for medical attendance and treatment in cases of : accidents and occupational disorders falling under the Workmen's Compensation Act and Rules thereunder and other illnesses. For this purpose, the Administration maintains one hospital at Vasco-da-Gama and two First Aid Posts one at the docks and one in the Workshops.

The Port Hospital at present gives out-patient consultations to the employees, their family members and dependents and has an in-patient accommodation for 50 beds. Facilities like X-Ray, Pathological investigations and surgical operation theatres (aseptic and septic) also exist. The accommodation in the hospital includes four special air conditioned wards with single bed. Out of the 50 beds, 16 (including 2 special wards) are reserved for the Mercantile Marine department.

The first aid posts manned by male nurses render first aid to the injured employees and in cases of sudden illness. When a doctor's attention is necessary either the patient is directed to the hospital or a Port Trust doctor attends to the patient on the spot.

Responsibilities in respect of sanitation of Port premises (office building and quarters) and land also rest in the Medical department.

(6) *Engineering (Mechanical Department)*.—The Engineering (Mechanical) department is headed by the Chief Mechanical Engineer.

Functions and Responsibilities.—The department looks after all mechanical and electrical works of the Port. The maintenance of the various port craft, locomotives, wagons, automobiles and other machinery is also the responsibility of the Mechanical department. There is a Mechanical workshop attached to the department which undertakes mechancial reports.

(7) *Marine Department*.—The Deputy Conservator is the head of the Marine Department.

Functions and Responsibilities.—The Marine Department is in charge of all the marine services which include pilotage, berthing of vessels, marine survey, salvaging operations, etc. The various craft belonging to the Port was also placed under the Marine department. The maintenance dredging work of the Harbour is the responsibility of this department. It has also to look after the fire-fighting arrangements in the Port.

(8) *Engineering (Project) Department*.—The department is headed by the Chief Engineer (Project).

Functions and Responsibilities.—The department is responsible for the quantity and quality of work relating to the Mormugao Port Development Project, for supplying the necessary data for budgeting for the Project, indicating the funds required in the form prescribed by the Accounts Department on time work relating to processing of contracts at all stages, estimating and requisitioning stores etc. for the Project, all such other works related to the Project.

(9) *Planning and Research Department.*—Director (Planning and Research) heads the Planning and Research department.

A Planning Cell has been in existence at this Port from 1964 under the Traffic Department until December 1970. The cell was reorganised as a separate Planning and Research Department from December 1970.

Functions and Responsibilities.—The main activities of the Planning and Research Unit are collecting, maintenance, analysis and presentation of the Port's statistics, economic appraisal of the Port's various investment proposals, Traffic forecasting, Traffic-flow and transportation surveys and other hinterland studies, Shipping and port-rate studies, collection and circulation of general information of relevance to the Port Administration, including the running of the Port Trust Library and the bringing out of the Port's monthly Newsletter etc.

Main facilities existing at the Port

In what follows are described in brief the main facilities existing at the port :—

(1) Six alongside cargo berths (berths 1 and 2 treated as one standard berth), with a quay length of 275 ft. served by rail, capable of berthing ships of upto 28 ft. draft, protected by a breakwater 1,714 ft. long, built in a north by east direction and a mole 885 ft. long running parallel to the quay and built from the seaward-end of the break-water.

(2) A lighterage berth 328 ft. long capable of berthing lighter craft upto 12 ft. draft.

(3) Safe anchorage/moorings for upto 50 vessels in the inner and outer harbour in fair season.

(4) Mobile cranes : Three cranes of 6, 12 and 30 tons capacity respectively (the last under erection).

(5) Fork lifts : Four fork lifts of ½ ton capacity each, four of 2 tons capacity each and two of 3 tons capacity each.

(6) Sixteen quay cranes : Thirteen of 3 tons capacity each, two of 6 tons capacity each and one of 30 tons capacity.

(7) Tow dredgers : one hopper and drag dredger of 1,500 cub. metre capacity and the other hopper suction dredger of 388·85 cub. metre capacity (505 cub. yards).

(8) Two tugs : One of single screw 850/925 H. P., and the other of twin screw 1,700 H. P.

(9) A signal Station manned round-the-clock equipped with V. H. P. telephone services.

(10) Bunkering facilities both at berth and in midstream.

(11) Ten sheds with an area of 20,232 sq. metres for storage of cargo and open space of 43,527 sq. metres at Mormugao Harbour and 41,675 sq. metres at Marshalling Yard, Vasco-da-Gama. All the sheds and plots are served in rail-sidings.

(12) A large roadstead capable of taking about 50 ships in the stream.

(13) Mechanical Ore Handling Plant (owned by a private Company) with a capacity of loading upto 1,000 tons an hour in ore carriers of 28 to 30 feet draft and stacking area of about 20,000 square metres for ore.

(14) Two (sea-barges) transhippers with a capacity of about 15,000 dwt. having loading rate of about 300 tons per hour in ore carriers mainly engaged in topping up operations in stream. One more (Sea-barge) transhipper is being put into operation shortly. These are owned by private companies.

(15) A loading station with 19,000 tons storage capacity and loading upto 12,000 tons per hour in ore carriers of 28 to 30 feet draft is planned to be installed in the harbour shortly by a private firm. This will be owned and operated by loading private company in Goa.

Physical Facilities created since Liberation

(*a*) *Improvement in existing facilities.*—(1) The draft of ships which was restricted to 28′ in the fair season and 26″ 6″ inches during the monsoon period has been improved to 28′ throughout the year with permission to load upto 30′ draft 2 hours before the rising tide.

(2) As against ships of only 575′ length which were permitted to enter the harbour, ships upto 650′ are permitted to come alongside the berths with special arrangements and ships upto 740′ have been permitted to enter the harbour.

(3) Facilities for fire-fighting arrangements have been provided.

(4) A 12-ton Coles Mobile crane has been installed and other of 30 tons is under erection.

(5) Four of 3 tons capacity each and two of 6 tons capacity each have been procured and commissioned and six fork lift trucks four of 2 tons capacity each and two of 3 tons capacity each are required.

(6) The surface of the wharves and the main road inside the harbour is improved by modern type of paving to ensure speedier movement of traffic on the wharves.

(7) Drainage scheme near Berth No. 7 is carried out.

(8) Extension of the Workshop building with a compound wall around it for security is done.

(9) Reclamation of pond near the Mechanical Ore Handling Plant is done for stock piling ores.

(10) Two Barge-loading jetties are constructed for expediting the loading of rail borne ore into steamers in the stream.

(11) Construction of new sheds and extension of existing sheds is completed, for additional storage capacity.

(12) Additional sidings have been laid to facilitate the movement of rail borne ore, and prepared areas for the stacking of ores.

(13) Construction of two new sheds in the Workshops at Vasco-da-Gama have been completed.

(14) Construction of surface storage reservoir has been completed.

(15) Construction of a shed is completed which is used as a temporary office building.

(16) A new 250KVA transformer is installed in the Workshop and new high tension line provided from the Power House to the Workshop.

(17) The construction of substation and extension of 'C' shed is completed.

(18) Three lathes and a Power Hammer have been procured for the Workshop.

(19) Improvement of fendering on the wharves has been done.

(20) Work of making good the deficiency of the wave-breaker blocks to the west of the breakwater is completed.

(*b*) *Purchase of new harbour crafts.*—(1) A 1500 cub. metres grab suction dredger is purchased.

(2) A 40 feet mooring launch is purchased.

(3) A powered dinghy is purchased.

(4) A 180 ton steel water barge is built.

(5) A teakwood rowing survey boat is purchased.

(6) A tug is purchased.

(*c*) *Other important miscellaneous works.*—(1) A Guest House has been constructed.

(2) Work for remodelling and extending the existing Port hospital into a fully equipped 50 bed hospital has been completed.

(3) A hall in the Port Institute premises has been constructed and improvement has been done to the Institute for the use of the staff.

(4) A building for a Marine Club has been constructed.

(5) Conversion of an incomplete acquired building into an Administrative Office building has been completed.

(6) Construction of one unit of type I and two units of type II quarters for the staff of the Meteorological Department has been completed.

(7) Work for the construction of 192 staff quarters with all the modern facilities has been completed.

(8) An X-Ray plant has been installed at the Hospital.

(9) For providing immediate residential accommodation for staff some of the existing structures are converted into residential quarters.

Traffic Pattern at the Port :

The following statement gives the total yearly traffic handled at the Port from 1960-61 to 1970-71 :—

Year		Exports (in tonnes)	Imports (in tonnes)	Total (in tonnes)
1960-61	..	62,27,801	1,83,991	64,11,792
1961-62	..	63,42,953	1,62,473	65,05,426
1962-63	..	53,53,906	1,12,077	54,65,983
1963-64	..	58,40,958	1,15,405	59,56,363
1964-65	..	64,03,356	2,16,352	66,19,708
1965-66	..	76,20,975	2,39,127	78,60,102
1966-67	..	76,88,932	3,96,764	80,85,696
1967-68	..	77,14,105	4,17,682	81,31,787
1968-69	..	84,09,416	3,69,468	87,78,884
1969-70	..	87,87,924	2,41,255	90,29,179
1970-71	..	1,06,51,838	3,53,134	1,10,04,972

The following tables give the handling of important commodities of the export and import at the Port :—

TABLE No. 4.—TABLE SHOWING EXPORT CARGO COMMODITIES

(In Metric Tonnes)

Commodities	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
	1	2	3	4	5	6	7	8	9	10	11
Iron Ore excluding pellets	60,35,556	62,11,280	52,57,852	56,90,451	61,56,225	71,72,158	72,67,923	68,75,912	74,25,319	76,23,990	90,47,848
Iron Ore Pellets	..	..	..	..	..	..	..	3,69,893	3,97,451	4,57,040	4,96,410
Black Iron Ore	..	..	..	..	.	2,89,042	1,65,163	1,80,806	1,47,526	1,42,352	3,30,986
F.M. Ore ..	1,34,532	88,348	74,062	1,23,480	1,70,924	75,740	84,187	1,18,765	1,81,036	2,03,780	3,51,149
Manganese Ore	47,012	35,340	13,310	17,120	42,906	41,654	1,34,807	1,21,546	2,00,592	2,29,532	3,17,112
Bauxite ..	..	..	..	..	..	..	..	..	19,914	66,016	35,865
Oil cakes ..	..	..	..	7,875	31,820	41,112	35,666	32,543	37,231	64,396	71,956
Other General Cargo ..	10,701	7,985	8,682	2,032	1,481	1,269	1,186	14,640	347	818	512
Total Exports ..	62,27,801	63,42,953	53,53,906	58,40,958	64,03,356	76,20,975	76,88,932	77,14,105	84,09,416	87,87,924	1,06,51,838

TABLE No. 5.—STATEMENT SHOWING IMPORT CARGO COMMODITIES

(In Metric Tonnes)

Commodities	1960–61	1961–62	1962–63	1963–64	1964–65	1965–66	1966–67	1967–68	1968–69	1969–70	1970–71
	1	2	3	4	5	6	7	8	9	10	11
Bitumen ..	959	479	2,661	2,175	2,316	3,043	2,855	4,624	3,601	3,089	1,447
Cement ..	18,575	14,909	24,422	16,922	28,628	24,591	29,432	26,091	5,585	..	..
Coal ..	..	..	..	..	..	..	..	..	..	6,740	..
Cryolite ..	..	..	..	..	..	..	..	..	..	3,009	..
Fertilizers ..	4,528	2,718	2,871	4,608	48,792	46,746	1,17,168	1,89,496	1,55,834	51,496	96,889
Flour ..	7,277	7,525	1,905	1,776	2,850	9,047	10,857	4,473	637	..	..
Foodgrains and Pulses	46,263	25,110	8,824	7,630	21,636	30,466	69,078	37,131	35,368	27,188	18,412
General Cargo ..	67,818	64,514	17,492	15,973	13,381	20,009	15,989	9,400	2,376	3,141	1,990
Lubricants ..	..	2,367	967	1,212	2,051	1,688	2,068	2,180	1,944	2,081	2,047
Rock Phosphate Sulphur	..	..	..	3,575	16,509	17,892	22,091	15,970	3,000	..	..
Petroleum Coke ..	..	..	..	..	..	..	..	..	..	1,267	..
Mineral Oils ..	38,571	44,851	52,935	61,534	80,189	85,645	1,27,226	1,28,317	1,61,123	1,43,244	2,32,349
Total Imports ..	1,83,991	1,62,473	1,12,077	1,15,405	2,16,352	2,39,127	3,96,764	4,17,682	3,69,468	2,41,255	3,53,134

It will be seen that the total traffic increased from 64,11,792 tonnes in 1960-61 to 1,10,04,972 tonnes in 1970-71.

In terms of export tonnage in foreign trade, as also in handling dry cargo, Mormugao Port ranks first amongst all the major ports in India.

In terms of total traffic tonnage, Mormugao Port ranks second amongst all the major ports in the country. Mormugao Port wrested this position from the Calcutta Port in the year 1968-69, and has been maintained for the successive period of three years. It can be fairly predicted that Mormugao will continue to stick at this position in the years to come.

Traffic patterns and economic hinterland of the Port

From a study of the growth in the Port's traffic as well as some other aspects of the Port's performance during the period after the Liberation of Goa (in December, 1961), it is seen that the traffic has grown considerably during the period, as also the tonnage of vessels visiting the Port. In fact, there has been a significant increase in the large-sized vessels visiting the Port recently ; for example 113 vessels of 30,000 dwt. and above, visited the Port during 1970-71 as against 10 during 1963-64 and nil prior thereto. The largest-sized vessel which frequently visits the Port for loading ore recently is of the order of 60,000 dwt. The following table gives the figures of the vessels that visited this Port from 1962-63 onwards as also the changing size pattern of ore vessels.

TABLE No. 5.—CHANGING SIZE-GROUP PATTERN OF ORE-VESSELS CALLING AT MORMUGAO SINCE 1962-63 TO 1970-71.

Year	Upto 15,000 (No. of vessels)	15001 to 20,000 (No. of Vessels)	20001 to 25,000 (No. of Vessels)	25001 to 30,000 (No. of Vessels)	Over 30,000 (No. of Vessels)	Total No. of vessels
1962-63 ..	345 (82%)	37 (9%)	36 (8%)	3 (1%)	....	421
1963-64 ..	317 (73%)	48 (11%)	59 (13%)	3 (1%)	10 (2%)	437
1964-65 ..	375 (76%)	60 (12%)	47 (9%)	5 (5%)	9 (2%)	496
1965-66 ..	455 (76%)	63 (11%)	62 (10%)	10 (2%)	4 (1%)	594
1966-67 ..	339 (66%)	84 (16%)	43 (8%)	20 (4%)	29 (6%)	515
1967-68 ..	252 (55%)	65 (15%)	70 (15%)	15 (3%)	54 (12%)	456
1968-69 ..	223 (52%)	46 (11%)	41 (10%)	22 (5%)	93 (22%)	425
1969-70 ..	197 (47%)	46 (11%)	48 (11%)	24 (6%)	103 (25%)	418
1970-71 ..	226 (45%)	61 (12%)	43 (9%)	58 (12%)	113 (22%)	501

Two interesting and healthy trends discernible in the emerging traffic patterns of the Port during the post-Liberation period are : (*i*) a tendency towards diversification of the Port's traffic, with a growing volume of non-ore traffic, and (*ii*) the expansion of Mormugao's service-areas to areas beyond Goa. The non-ore traffic at the Port area rose from 1·75 lakh tonnes in 1961-62 to 4·26 lakh tonnes in 1970-71. It is indeed a healthy trend, since it encourages the growth of a diersified complex of port-services and also reduced the Port's undue dependence on a single-commodity-traffic.

The Port has expanded its hinterland during the post-Liberation period. The economic hinterland of the Port comprises the following areas. :—

(*i*) The entire territory of Goa ;

(*ii*) The whole of Kolhapur and Sangli districts, and parts of Satara, Ratnagiri and Sholapur districts in the Maharashtra State.

(*iii*) Part of the Ananthapur and the Kurnool districts in Andhra Pradesh ;

(*iv*) The districts of Belgaum, Bijapur, North Kanara, Bellary, Dharwar and Chitradurga and parts of Raichur and Shimogi districts in the Karnataka State.

The region's total area is 57,400 sq. miles.

Whereas in 1960-61, almost cent per cent of the Port's traffic emanated from Goa, only about 85 per cent of the total traffic today emanates from the Goan territory though in absolute quantities the shape of the Territory has gone up during the same period. During the year 1969-70, 11·7 lakh tonnes of the Port's traffic emanated from or was destined to areas outside Goa, namely 10·6 lakh tonnes to and from Karnatak State, 0·5 lakh tonnes to and from Maharashtra State and 0·6 lakh tonnes to and from Andhra Pradesh State. In fact, the main factor leading to the growth of Mormugao traffic during the past few years may be said to be the coming of traffic from these new areas. It is expected that the pace of growth and diversification of traffic observed at the Port during the past few years will be kept up even more remarkably in the years to come.

Transport Links

The Port is connected with its hinterland by means of rail, road and waterways.

The rail link consists of the single metre gauge line connecting Mormugao to Londa, where it joins the vast rail network of the country.

Apart from the rail connection, there are also good road connections linking the Port with West Coast highway stretched from Bombay to Cochin, through Goa and Belgaum-Goa national highway.

The most important transport link of the Port is provided by the cheap water transport system of Goa, since most of the iron ore exported through Mormugao is transported by waterways of the two rivers system of Mandovi and Zuari in Goa—the average distance being only about 64 kilometres.

Barge Fleet Information

Over 90 per cent of the iron ore traffic shipped through the Port is handled through barges, which bring the ore from the river's loading points on the two inland waterway systems of Goa to the Port for shipment. One of the bottlenecks in the growth of iron ore traffic therefore has been the inadequacy of the barge fleet engaged in the ore traffic. It is a noteworthy feature that the number of barges engaged in the ore traffic has increased from 161 in 1964 to about 232 in 1972. This accretion in the barge fleet of the exporters at this Port includes 4 barges of 1000 tonnes capacity. A number of exporters have a further programme of expansion of their barge fleet with the construction and by replacement of old and low capacity barges by new and higher capacity barges.

Welfare Activities

(*i*) *Port Trust Hospital.*—At the time of Liberation, this port had a 10-bed hospital with very limited facilities. It has since been expanded into a 50 bed hospital during the year 1968. The hospital provides facilities like X-ray, Specialised treatment, surgical operations, etc.

(*ii*) *Welfare Fund.*—The port has Welfare Funds constituted under the Mormugao Port Employees' (Welfare Fund) Regulations. Grants for deserving cases are sanctioned within these regulations. Welfare Fund Advisory Committee adivses the Chairman on the utilization of the Welfare Fund.

(*iii*) *Residential quarters.*—The Port has constructed 192 quarters for the staff and allotted them to various categories of employees in the year 1970. These are in addition to 163 old residential quarters already in use. The new quarters are provided with modern facilities. The development project of the Port also envisages construction of nearly 400 quarters with facilities like township having amenities like a school welfare centres, etc.

(*iv*) *Port Employees Consumer's Co-operative Society Ltd.*—This society, in addition to supplying provision and ration commodities, has been running two canteens, one for employees in the Workshops and the other for the employees in the administrative offices.

(*v*) *Mormugao Port Trust Institute.*—The Port Trust Institute located at Vasco-da-Gama caters to the recreational needs of the Port employees. The Institute provides facilities for indoor games like badminton, table-tennis, carrom, billiards, etc. In addition, the Institute also arranges

screening of educational and documentary films. There is also a football ground adjacent to the Institute. 'Bharat Lines', a labour colony situated at the Headland, are also provided with recreational facilities.

(*vi*) *Mormugao Port Officers, Club.*—The officers of the Port have constituted a Club of their own for which the Board of Trustees have permitted the use of the Port Guest House premises excepting the living rooms.

Port Employees Association

The employees of the Port have constituted a Union known as Mormugao Port and Railway Workers' Union which is managed by the employees themselves. This Union is affiliated to the All India Port and Dock Workers' Federation.

There are two Associations of the Port Officers : one is Mormugao Port Trust Marine Officers' Association and the other constituted by the remaining Port Officers known as Mormugao Port Officers' Association.

Dock Labour Board

The Dock Workers' Regulations of Employment Act was made applicable to the port of Mormugao in 1965 and a Dock Labour Board was constituted. The scheme framed under the Act covers only the stevedoring work and only two categories of workers viz. the winchmen and the gangmen. The labour force i.e. about 3,000 workers under the Dock Labour Board have three labour unions as under :—

(*i*) Goa Dock Labour Union (INTUC).
(*ii*) Transport & Dock Workers' Union, Goa (H.M.S.).
(*iii*) Mormugao Waterfront Workers' Union (AITUC).

Finance of the Port

The working results of the Port for the last nine years are shown below :—

Years		Revenue Receipts	Revenue Expenditure	Net Surplus
1961-62	..	153.56	81.88	71.68
1962-63	..	125.74	64.27	61.47
1963-64	..	124.52	45.26	79.26
1964-65	..	145.75	73.94	71.81
1965-66	..	181.29	160.36	20.93
1966-67	..	197.75	127.78	69.97
1967-68	..	225.37	135.99	89.38
1968-69	..	221.54	147.45	74.09
1969-70	..	221.91	173.52	48.43

Development Project of the Port

Judged solely by the volume of its export, Mormugao is the leading port in India ; taking the total trade imports and exports together it ranks second after Bombay. Endowed as it is with an extensive harbour which can accommodate 50 or more ships and serving as it does a hinterland of growing economic importance, Mormugao has great potentialities for the development and diversification of its trade.

Inspite of all-round growth of the Port's traffic and services areas in recent years, its physical facilities by and large, are far more modern, compared to the sophisticated port facilities developed in other countries in handling ores, etc. Iron ore, the Port's main traffic, is at present loaded by ship's gear in stream and by shore cranes using manually filled slings/trays, alongside the berths, except at one berth where a privately owned Mechanical Ore Handling Plant is installed. The quantity handled alongside berths by Mechanical Ore Handling Plant is about 25 per cent, the remaining 75 per cent being handled manually mostly in sream. The average loading rate *per day* is 10,000 tonnes at the mechanised berth, and 2,000 tonnes in stream, as against 6,000 tonnes *per hour* in many ore ports abroad. Consequently, the time taken for loading the vessel is uneconomically long accounting for higher freight and detention costs. The present facilities also restrict the optimum size of vessels that can be handled at the Port, say 30,000 dwt. vessels at present, whereas elsewhere in the world, 60,000 dwt. to 1,00,000 dwt. vessels are in vogue, with mechanised loading facilities to load at a rate of 6,000 to 16,000 tonnes per hour. The Goan ore is sold in a very competitive market and unless freight costs are kept to the minimum, it will cease to be competitive and it would be difficult to sustain the trade. During the last 4 to 5 years lot of thinking and planning has been done about the development of the Port's facilities and the Government have finally sanctioned the development project of the Port at an estimated cost of Rs. 28·64 crores in January 1970.

The main facilities envisaged in the Project are :—

(*i*) An ore-pier for taking 60,000 dwt. ore carriers with provision for deepening the pier to take 1,00,000 dwt. when necessity arises. The ore pier to have as an adjunct to it berths for unloading ore from barges brought from the mines to the Port. After its commissioning, 60,000 dwt. vessels can be berthed at all states of tides, and upto 80,000 dwt. vessels at high tide.

(*ii*) A Mechanical Ore Handling Plant with a rated capacity of 8,000 tonnes per hour along with barge unloaders, the stacking areas, stackers, bucket wheel reclaimers, wagon tipplers and other structures and ancilliaries necessary for operation of the mechanical ore loading facility. With this, the turn-round time of a 60,000 dwt. vessel at the Port will be reduced to one day.

(*iii*) Dredging of the channel and approaches to the berths to enable 60,000 dwt. bulk carriers to use the Port. In general, the harbour draft to be increased from present 38′ to 45′. Suitable soil out of the dredged soil to be used for reclaiming land for the ore stack pier and for providing land for construction of future berths. Total new reclamation about 70 acres and total length of the retention bund about 1·8 kms.

(*iv*) Provision of a mineral oil berth for handling oil tankers, which berth also will have the same draft as the ore-berth (43′) on account of their close proximity.

(*v*) All ancilliary facilities like additional railway sidings, locomotives and wagons, roads, water supply, drainage, buildings, tugs, workshop equipments, fire-fighting and electrical equipment, equipments for night navigational aids, etc.

The Development Project Report was sanctioned by the Government in January 1970. The original estimated cost of Rs. 28·64 crores has since been revised and the Project is expected to cost Rs. 31·98 crores.

The work on dredging and reclamation of the Project was started in February 1970. The Dredging and Reclamation work forms a major important component of the Development Project. The work has been entrusted to a Yugoslav firm, M/s. Ivan Milutinovic Pim on contract basis.

The procurement action relating to the other works of the Project has already been initiated.

The Port's impact on Goan Economy

It will be seen from the account given above that the Mormugao Port has a long history dating back to about a century back, as also a significant record of achievements, particularly during the last one decade ; and judging from the dimension of the development project that is under way at present, which involves a total investment of more than four times the Port's existing asset value, it has also a very bright future.

The port's economic impact on the territory of Goa and on the other neighbouring regions has been strikingly significant, since it serves as the only outlet for the vast ore exports from Goa, which today constitute the mainstay of Goan economy. The Port's developing facilities are also helping the Goan economy gradually to switch-over to more sophisticated lines of industrialization, such as fertilizer and chemical industries, etc. Due to the facilities afforded by the Port, many more industries will come to be established in the territory which will mark the final breakthrough for Goa towards a process of cumulative industrialization and economic development.

* * *

CHAPTER 15—EDUCATION AND CULTURE

HISTORICAL BACKGROUND

Prior to the advent of the Portuguese in India, during the old days under the Kadambas, there were Pathashalas imparting training in Sanskrit literature and *Vedas*, *Yogas*, *Shastras*, etc. There were also small study centres, which were run in *maths*, *agraharas* and *Brahmapuris*, wherein the youth were imparted education into the realm of *Vedas*, *Shastras* and *Puranas*. Other subjects taught were mathematics, astrology, literature, grammar, philosophy, medicine, etc. The schools were gradually run in vestibules of temples, porches of big residential houses, verandahs of village administrative offices, etc. Education was confined to *Brahmins*, *Kshatriyas* and *Vaishyas*. During the Muslim Interlude, attempts were made to introduce *Madrasas*. With the advent of the Portuguese, these oriental schools disappeared and gave way to the Portuguese seminaries. Having placed administration of Goa after its final capture on a firm basis, Albuquerque established a rudimentary school. But it was left to the missionaries of religious orders, specially the Franciscans and Jesuits, to form a systematic and mature scheme of education in Goa. At first their efforts in this respect were restricted to teaching the catechism and imparting rudimentary instructions ; but as early as in the year 1541 an educational institution, the first of its kind in the country, called the ' Seminario de Santa Fe ' or the Seminary of the Holy Faith, was founded, to which not only the youth of Goa, but also those of other countries of the East flocked to be instructed in the languages and sciences of the West. It was pompously called the University and the Government endowed it with the large funds accruing from the landed properties confiscated by the State on the demolition of the Hindu pagodas to which they once belonged. In 1554 were instituted primary schools, known as Parish Schools, by King John III of Portugal. These were attached to village churches and were conducted by the priests. They imparted training in reading and writing Portuguese and in singing religious songs. The expenditure for the maintenance of these schools was incurred from the funds of these churches. In 1545 the system of instruction became more popular, elemantary schools having sprung up in almost all the parishes. Almost all the religious orders possessed colleges of their own, and vied with each other in promoting the spread of education, but foremost amongst them was the Society of Jesus, which, in addition to the above mentioned Seminary, owned a college at Margao, which was transferred

in 1610 to Rachol. This institution is still kept up, under the superintendence of secular priests, and is devoted to the training of candidates for priesthood. After the expulsion of the Jesuits from Goa, their Novitiate in the island of Chorao and their House of 'Bom Jesus' were converted, by order of Government, into public seminaries, but the latter was of short duration, while the former continued till 1858, when it was closed. Besides these,there existed special schools for the benefit of the neophytes and of the fair sex. The latter, though limited in number, were brought up in the convent of 'Santa Monica', and in the retreats of 'Nossa Senhora de Serra' and of 'Santa Maria Magdalena'. First official attempts to impart primary education were made in the year 1772 when primary teachers known as 'Professores regios' were appointed and an education levy was imposed on the population for the payment of these 'Professores regios'. These parish schools continued to function in a rudimentary form for some years and were subsequently closed down in the year 1798. The educational system remained unsatisfactory for some years. In 1773 the Government, resolving to give an impetus to education, established in various parts of the country public grammar-schools, for the support of which a special cess was imposed, and founded two other institutions intended to teach the military and naval arts ; these were followed in 1812 by a Mathematical School. In 1817 the three latter institutions were amalgamated into one, under the designation of 'Academia Militar de Goa', which name was subsequently changed to 'Escola Matematica e Militar'.

In 1829 were opened Government Primary Schools, the number of which had risen to 9 by 1831. The curriculum also underwent a change in the year 1831. The 'Normal School' was established for the training of teachers in the year 1841. In 1844, a Medical School was founded. In 1854 were established a 'Normal School' as well as a High School, called 'Lyceu Nacional de Nova Goa', and a class for teaching chemistry at about the same time. In addition to these higher-grade establishments, there were 59 public lower-grade schools. In 1846, girls schools were also opened in Goa. Of late, education has been comparatively better cared for in Goa than formerly. In 1869-70 there were 137 lower schools with 6,027 pupils of both sexes, of which 52 were public and 85 private ; 29 higher schools, including the 'Lyceu Nacional' or High School, with 2,433 pupils, all males, of which 21 were public and 8 private ; the Medical School, with 60 pupils ; the School of Chemistry, with 48 pupils ; the Mathematical and Military School, with 137 pupils and the Seminary for priests, with 92 pupils. Besides these, there were three public schools for girls. The Military School, is however, now closed, and a college for experimental sciences, called 'Instituto Professional', had been created in its place. The total expenditure for public instruction in

1874-75 was £ 3,319-8-10 [1]. Lyceum at Panaji, English Schools in Bardez and Margao and the French School at Mapusa were established during the year 1854-55. By then there were 37 Government Primary Schools and 75 Private Primary Schools in the entire territory of Goa with an enrolment of 6,124 students. The Lyceum had 333 students, other secondary institutions 200 ; the seminaries 445 and Private Institutions had 1,114 students. The enrolment in ' Normal ' schools stood at 17. Marathi was one of the subjects of study in Goa in 1954 besides other languages such as English, French and Latin.

The entire system of education was reorganised in the year 1871 and Christian doctrine was made compulsory only to the Christian students. Primary education was also made compulsory for all children of the age group 9-12. The curriculum in the ' Normal ' schools was reorganised in 1881 and all the Government Primary Schools were attached to ' Normal ' schools. The teacher's training course was also remodelled in the year 1882. The number of Government schools had risen to 94 including 8 for girls by 1892. The duration of the course of the ' Normal ' schools was extended from 2 years to 3 years in 1907 and admission to these schools was declared open to all whether they professed the State religion or not.

The course of primary education was reorganised again in 1931 and was made of 5 years duration. The first year course was preparatory and examinations were conducted at the end of the 4th year or 3rd Std. and also in the final year at the end of the 4th Std. The Order making the primary education free and compulsory for all the children belonging to the age group 7-14 was last issued by the Portuguese on 17th October 1958 and was introduced from June 1959. However, the education was imparted in Portuguese. In that system there was no scope for primary education in the mother-tongue. Though this Order was issued, children belonging to the school going age group of 7-14 did not get the benefit of the same and were almost deprived of education because of the Portuguese insistance that every citizen in the Portuguese Empire must study in Portuguese, a language foreign to the students and difficult to understand particularly to the students belonging to that age group.

There were in the entire territory of Goa, Daman and Diu, 476 primary schools with an enrolment of 43,244 students, the number of primary teachers being 905. The number of High Schools before Liberation for the entire territory stood at 119 with an enrolment of 9,511 students, and the number of Secondary Teachers was 744. Of these, the largest number of schools were located in the district of Goa.

The background for secondary education was established with the advent of the 19th century when secondary education was imparted by

[1] Fonseca, *op. cit.*, pp. 56-58.

seminaries. The first official secondary school called Lyceum was established in the year 1854 at Panaji. An English Medium School and a French School were subsequently established at Margao and Mapusa respectively. The secondary education has witnessed very little changes and the enrolment during the time of Liberation in the Lyceum was 971 and in other schools it stood at 1,700.

No facilities existed for higher education. There were no colleges excepting the Medical School. Those who had the ambition of pursuing higher studies were forced under the circumstances to go to Lisbon for the same or to continue their higher education in the Indian Universities.

LITERACY AND EDUCATIONAL STANDARDS

The literacy figures are available as per the census of 1910 which puts the literacy percentage at 13·1 to the total population of the district of Goa excluding those below 6 years of age. The literacy percentage for males stood at 19·8, while that for females stood at 6·4. The following table gives the talukawise break-up of literacy percentage in 1910 for males and females to the total population over six years of age :—

TABLE No. 1.—TALUKA-WISE LITERACY PERCENTAGE TO THE TOTAL POPULATION

Taluka	Percentage of Literacy		
	Males	Females	Total
Tiswadi	22.1	10.2	16.15
Salcete	19.2	6.5	12.85
Bardez	29.9	11.1	20.5
Pernem	12.2	1.5	6.85
Sanquelim	20.7	2.6	11.65
Satari	6.8	0.5	3.65
Ponda	18.5	2.9	10.7
Sanguem	9.8	2.3	6.5
Quepem	11.5	1.9	6.7
Canacona	13.4	1.3	7.35

In the Old Conquests the percentage of illiteracy was highest in Salcete taluka and was lowest in the Bardez taluka. In the New Conquests the percentage of illiterates stood highest in Sanquelim taluka and was lowest in the Sanguem taluka.

The position of literacy remained almost unaltered till the Liberation of the territory. Soon after the Liberation of the territory in the year 1961, the entire educational system prevailing in Goa had been thoroughly reviewed based on the recommendations of the Jha Committee, taking in view its integration with the educational system prevailing the rest of the country. The study of the three R's was mostly confined, as is witnessed in the rest of the country, to the higher stratas of society.

The literacy percentage of the territory as a whole before Liberation was 30.75 per cent while in 1971 it was 44.75 per cent, the corresponding

figures for males being 39.04 per cent and 54.31 per cent and for females 23.01 per cent and 35.09 per cent respectively.

The following figures pertaining to the year 1974-75 give an idea regarding the out-turn of matriculates, graduates and post-graduates in the territory as a whole :—

Matriculates	.. .. ..		6,590

Graduates :

Arts and Science ..	895	Commerce ..	95
Medicine ..	77	Education ..	88
Pharmacy ..	25	Post-Graduates ..	100
Engineering ..	27		

PRIMARY EDUCATION

Facilities for primary education in the distirict were mainly provided for by the Government. Of 753 primary schools in the district during the year 1971-72, as many as 719 were under Government management. Besides these primary schools there were in the district 175 middle schools of which 156 were conducted by the Government, and 89 high schools had Primary classes attached to them. The total strength of these primary schools stood at 93,890 in the year 1971-72. Primary education is imparted in English, Marathi, Konkani, Urdu, Hindi, Kannada and Portuguese as the media of instruction. More than 95 per cent of the children belonging to the school-going age group of 6 to 11 are enrolled in the schools. It may also be noted that out of a total number of 383 villages in the district, as many as 333 villages had schooling facilities-those without schools being only 50. Similarly, all the 11 towns in the district had educational facilities.

MIDDLE EDUCATION

Middle education is vested both in Government as well as in private management. During the year 1971-72, there were in the district, 175 middle schools (Stds. V to VII), 89 per cent of which were conducted by the Government. During the same period, 167 High Schools had middle classes attached to them. At the middle stage, English, Marathi and Urdu formed the media of instruction.

SECONDARY EDUCATION

At the secondary stage, education is mainly managed by private institutions. Of 187 secondary schools in the district, only twelve were under Government management. Of these high schools as many as 70 per cent were located at rural areas.

The following tables give the talukawise distribution of schools according to the stages of education and enrolment according to classes :—

TABLE No. 2.—DISTRIBUTION OF SCHOOLS ACCORDING TO TALUKA, TYPE AND STAGE OF EDUCATION, GOA DISTRICT, 1971

Serial No.	Name of Taluka	No. of Primary Schools in				No. of Middle Schools in				No. of High Schools in				Total No. of Schools in			
		G	A	UA	T	G	A	UA	T	G	A	UA	T	G	A	UA	T
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Pernem ..	.. 59	..	.	59	28	..	..	28	2	9	..	11	89	9	..	98
2	Bardez ..	.. 70	..	1	71	24	..	2	26	1	37	..	38	95	37	3	135
3	Bicholim ..	.. 59	..	3	62	21	1	1	23	2	7	..	9	82	8	4	94
4	Satari ..	.. 75	..	..	75	15	..	..	15	1	1	1	3	91	1	1	93
5	Tiswadi ..	.. 44	3	5	52	12	2	2	16	1	25	1	27	57	30	8	95
6	Ponda ..	.. 116	3	..	119	11	1	..	12	1	21	..	22	128	25	..	153
7	Sanguem ..	.. 83	1	..	84	8	2	.	10	1	8		9	92	11	..	103
8	Mormugao ..	.. 20	1	1	22	9	1	1	11	..	8	1	9	29	10	3	42
9	Salcete ..	.. 96	9	2	107	11	..	6	17	1	42	..	43	108	51	8	167
10	Quepem ..	.. 50	2	..	52	8	..	..	8	1	6	..	7	59	8	..	67
11	Canacona ..	.. 47	3	..	50	9	..	..	9	1	8	..	9	57	11	..	68
	Total	.. 719	22	12	753	156	7	12	175	12	172	3	187	887	201	27	1,115

G=Government A=Aided UA=Unaided T=Total

TABLE No. 2—Contd.

Sr. No.	Name of Taluka	No. of Middle Schools having Primary classes in				No. of High Schools having Primary classes in				No. of High Schools having Middle classes in				Total No. of Schools having	
		G	A	UA	T	G	A	UA	T	G	A	UA	T	Primary Classes	Middle Classes
1	2	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Pernem	27	..	..	27	..	..	..	..	..	5	..	5	86	33
2	Bardez	23	..	1	24	..	27	..	27	..	35	..	35	122	61
3	Bicholim	20	1	1	22	..	..	..	..	..	7	..	7	84	30
4	Satari	14	..	..	14	..	1	..	1	..	1	..	1	90	16
5	Tiswadi	11	1	1	13	..	11	1	12	1	23	1	25	77	41
6	Ponda	10	..	..	10	..	3	..	3	..	21	..	21	132	33
7	Sanguem	8	1	..	9	..	4	..	4	..	8	..	8	87	18
8	Mormugao	9	1	1	11	..	5	1	6	..	8	1	9	39	20
9	Salcete	10	..	6	16	..	30	..	30	1	41	..	42	153	59
10	Quepem	8	..	..	8	..	3	..	3	..	6	..	6	63	14
11	Canacona	9	..	..	9	..	3	..	3	..	8	..	8	62	17
	Total ..	149	4	10	163	..	87	2	89	2	163	2	167	995	342

G—Government, A—Aided, UA—Unaided, T—Total,

TABLE No. 3.—ENROLMENT ACCORDING TO TALUKA, CLASS, GOA DISTRICT, 1971-72

Serial No.	Taluka	Class I	II	III	IV	V	VI	VII	VIII	IX	X	XI	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Pernem	3,344	1,601	1,379	1,043	979	744	561	434	353	298	193	10,929
2	Bardez	5,811	3,567	3,212	2,519	3,128	2,522	2,195	1,983	1,826	1,530	1,069	29,362
3	Bicholim	3,328	1,698	1,397	1,154	1,163	804	739	669	545	396	259	12,152
4	Satari	1,861	942	725	590	413	305	168	274	47	17	..	5,342
5	Tiswadi	4,512	2,848	2,482	2,029	2,536	2,261	1,878	1,779	1,499	1,306	908	24,038
6	Ponda	4,691	2,464	2,074	1,731	1,599	1,372	1,124	1,079	839	590	453	18,016
7	Sanguem	1,743	911	760	646	535	442	348	284	198	,165	88	6,120
8	Mormugao	2,363	1,612	1,323	878	858	667	520	463	367	283	225	9,559
9	Salcete	7,389	4,259	3,858	3,147	3,486	2,620	2,144	2,092	1,736	1,685	1,203	33,619
10	Quepem	2,088	966	827	743	916	785	627	618	579	489	297	8,935
11	Canacona	1,662	646	576	491	445	368	304	329	267	213	153	5,454
	Total ..	38,792	21,514	18,613	14,971	16,058	12,890	10,608	10,004	8,256	6,972	4,848	1,63,526

Teachers

In the district there were 3,615 Primary School teachers, 1,961 Middle School teachers and 1,956 Secondary School teachers. In order to improve the standard of instructions, it is imperative that teachers should receive proper training in education. In order to achieve this aim, a Government Primary Teachers' Training School has been established at Porvorim. Facilities for the training of the Secondary teachers are provided by the Institute of Education at Panaji which conducts courses leading to the B. Ed. degree. Besides, there is a Primary Teachers' Training School located at Margao.

Medium of Instruction

In the district of Goa, English, Marathi and Konkani are the media of instruction. Konkani forms the medium of instruction in only a few schools at the primary level while English and Marathi form the media of instruction for all classes. Besides, there are a few schools with Urdu as a medium. There are also a couple of Portuguese and Kannada medium schools in the district.

Buildings

Of the total number of schools more than 50 percent were located in the building owned by them while a few others were located in building partly owned and partly rented. The remaining schools were located either in rented or rent-free buildings, like temples, etc.

COLLEGIATE EDUCATION

There were in the district five non-Government Arts and Science Colleges including one college for girls in the year 1972-73. The total number of students enrolled in the colleges in the district during the year 1972-73 stood at 4,899 of which 3,174 were boys and 1,725 were girls.

Till the year 1961-62, no facilities for higher education were available. After Liberation, a number of colleges have been established in the district. A Post-Graduate Centre was started with headquarters at Panaji in 1965-66. Recently, a College of Art has also been established under the auspices of the Kala Academy. Besides the Art and Science Colleges, there is an Engineering College, a Medical College, a Pharmacy College, two Commerce Colleges, an Arts and Commerce College, a Commerce and Economics College and a Teacher's Training College. The Engineering College has recently been shifted to Farmagudi in the Ponda taluka. Medical and Pharmacy Schools, existing in the district at the time of Liberation were elevated to colleges after Liberation.

The main institutions that provide medical education in the district are the Goa Medical College and the Goa College of Pharmacy. In

what follows is given in brief, the actual working of these two colleges *viz.* the Goa Medical College and the Goa College of Pharmacy.

Goa Medical College :

The Goa Medical School was founded as early as in 1842 under the decree dated the 5th November, 1842. The courses of study in medicine and pharmacy were defined by another decree in 1847. Six groups of subjects were introduced for the study of medicine and the duration of the course was fixed at four years. The duration was further extended to five years in 1865 when nine groups of subjects were introduced for the study of medicine. Though minor changes were effected from time to time by the local Government, the major reorganisation occured in 1946 when the school was separated from the Health Services as an autonomous Unit *vide* Decree No. 35610 dated the 24th April, 1946. Physical facilities at the school remained almost static though changes in curriculum were introduced from time to time.

After completing the course leading to Diploma of 'Medico Cirurgiao', internship for six months was compulsory. About thirty students were admitted every year. The medium of instruction was Portuguese. The French and American text-books prescribed for the course were translated into Portuguese. The Goa Medical School was upgraded to the Goa Medical College from June 1963. Since Liberation about 140 doctors obtained the qualification of 'Medico Cirurgiao' from the Goa Medical School which was discontinued with the passing of the last student in the month of June 1970. A condensed M.B.B.S. Course was started for the licenciates of the Goa Medical School and 19 doctors got condensed M.B.B.S. degree from it and during 1970-71, 14 doctors were studying the same course. The total number of doctors who qualified with the M.B.B.S. since the beginning of the course is 138. During the year 1972-73, 66 students were admitted for the 1st M.B.B.S. Course. At present there are 300 students in the undergraduate medical course whereas there are 48 students continuing post-graduate studies.

The M.B.B.S. Course of this college was recognised by the Medical Council of India in March 1971. The College is also recognised by the Medical Council of India for starting the post-graduate degree course in the following subjects :—

(1) M.S. in Anatomy.
(2) M.D. in Physiology.
(3) M.D. in Pharmacology.
(4) M.D. in General Medicine.
(5) M.D. in Pharmacological Medicine.
(6) M.D., D.A. in Anaesthesiology.
(7) M.S. General Surgery.
(8) M.S. Orthopaedics.

(9) M.S. Ophthalmology.
(10) M.S. Obstetrics and Gynaecology.
(11) M.D. Pathology and Bacteriology.

The College of Physicians and Surgeons of Bombay have also recognised this College to start diploma courses in the following facilities, and the successful candidates in the examination held in October 1971, were the first post graduate qualified doctors of this college :—

(1) Diploma in Child Health.
(2) Diploma in Gynaecological Obstetrics.
(3) Diploma in Psychological Medicine.
(4) Diploma in Orthopaedics.
(5) Diploma in Anaesthesiology.

The School of nursing for the basic course of Nursing was started at this College in March 1970. This nursing school is an upgrading of the Auxiliary Nursing and Midwifery School started at Ribandar Hospital from 1965-67. The School is affiliated to Maharashtra Nursing Council and annually 20 students are admitted.

In order to encourage the students in their studies, the following prizes have been instituted in the college :—

Dr. Pranacharya Ranachandra Pandurang *alias* Dada Vaidya Prize in Medicine.

Dr. Anant Narahar Jejurikar Prize in Surgery.

Shri Trimbak Krishna Tatau Prize in Medicine.

Prabhu Nasnodkar Prize in Preventive and Social Medicine.

Late Ramchandra Vaman Naik Karande *alias* Fondu Shastri Karande Trust.

D. B. Bandodkar, Gold Medal.

Goa Medical College Prizes.

The XIX Psychiatric Conference Prizes.

Dr. Ernest Borges Memorial Scholarships.

Nehru Memorial Scholarship.

Besides the above prizes, certificates of Honours are awarded to the deserving students. Scholarships, loan scholarships and freeships are also awarded to deserving candidates.

The Goa Medical College maintains two full fledged hospitals, one at Panaji and the other at Ribandar. A Blood Bank is also conducted by the College in the premises of the Panaji Hospital.

The Hospitals at Panaji and Ribandar provide curative and preventive facilities to the public. Both the hospitals have indoor and outdoor patients wards. These hospitals have a total bed strength of 539 ; 333 at Panaji and 206 at Ribandar. The daily average of outdoor and indoor

patients is 450 and 29 respectively. Fifty-five beds in the T.B. Hospital at Panaji are being looked after by the Professor of Tuberculosis.

Goa College of Pharmacy

The Goa College of Pharmacy was established by upgrading the old 'Curso de Farmacia da Escola Medico Cirurgica de Goa'. This course was existent in Goa for more than 100 years and scores of pharmacists passed through the school. According to the legislation still in vogue in the Union Territory of Goa, Daman and Diu, the profession of pharmacy is clearly defined and separated from the medical profession.

The Goa College of Pharmacy has therefore more than 100 years of tradition in the field of pharmaceutical education. The College was affiliated to the University of Bombay in June 1963. It conducts the three years course leading to the degree of Bachelor in Pharmacy (B. Pharm.). In addition, the College also conducts the Diploma Course in Pharmacy (Dip. Pharm.) of two year duration under the auspices of the Pharmacy Council of India, New Delhi.

The University of Bombay has granted recognition to the Goa College of Pharmacy as a post graduate research institution for conducting the courses in M. Pharm. The number of research students which would be trained in the College depends on the number of research guiding professors recognised by the University. Each research guiding professor is authorised to register 10 students under him.

The Goa College of Pharmacy is the only affiliated Pharmacy College of the University of Bombay.

With the coming up of factories for pharmaceuticals and chemicals both in the public and the private sector, the need of persons having post graduate research and experience has greatly increased in the past years. With this end in view, post graduate research in Pharmacy is included in the Fourth Five-Year Plan. The Planning Commission has granted an amount of Rs. 21,00,000·00 for the College for the Fourth Five-Year Plan, which includes an amount of about Rs. 10,00,000·00 for the construction of a new college building with the facilities for hostel, office, library and research laboratories, etc.

By the middle of 1971, three students attained Master's degree in Pharmacology, 61 Bachelor's degree in Pharmacology and 50 Diploma in Pharmacology since the affiliation of the college to the University of Bombay.

POST-GRADUATE EDUCATION

Centre of Post-Graduate Instruction and Research

The Centre of Post-Graduate Instruction and Research was set up at Panaji in June 1965 with a view to providing facilities for post-graduate

instruction and research to those of the students graduating from the colleges in Goa. Collegiate education which was unknown to Goa till Liberation, started in 1962 with the opening of arts and science colleges in Panaji and Margao in June 1962. This was followed by the upgrading of schools of medicine and pharmacy into the Goa Medical College and the Goa College of Pharmacy. New Arts and Science colleges as well as Commerce colleges, a college of Education and a college of Engineering followed almost immediately. The first batch of the students from the Arts and Science colleges of Goa graduated in 1965 and the need was felt for making available to them facilities for post-graduate instruction and research. Government of Goa subsequently approached the University of Bombay for advice and guidance. The University of Bombay resolved at the meeting of the Senate held on April 30, 1965, to establish the centre in Goa to provide facilities for post graduate instruction and research. The University of Bombay attached a Centre of Historical Research to the Centre of Post Graduate Instruction and Research at Panaji as it could succeed in acquiring the whole valuable collection of historical source material as a gift from Dr. Pissurlencar.

The Centre of Post-Graduate Instruction and Research, Panaji was duly established by the University of Bombay in June 1965 after obtaining the approval of the various statutory bodies of the University. In the first year, instruction was provided in the subjects of English, Economics, Mathematics and Chemistry. Its regular teaching staff during that year consisted of a Professor of English, an Honorary Professor of History, a temporary Reader in Economics (transferred from the School of Economics, University of Bombay), and a lecturer in Portuguese and French. The teaching work was done with the help of recognised post-Graduate teachers from the local Arts and Science colleges of Panaji, Margao and Mapusa, as well as visiting teachers from the Departments and the constituent colleges of the University of Bombay. The total enrolment in the first year was 71. The total money spent during the first year was Rs. 84,203.00 out of which Rs. 30,000.00 was spent on the academic staff, Rs. 18,000.00 on books and journals, Rs. 9,000.00 on administrative staff, Rs. 5,000.00 on incidental expenses and honoraria to post-graduate teachers not on the teaching staff of the Centre. The total receipts of that year were about Rs. 16,000.00 from tuition and other fees and deficit of Rs. 68,000.00 was met entirely out of a grant of the like sum by the Government of Goa, Daman and Diu.

During the year 1969-70, the total enrolment was 212. The total income on account of tuition and other fees in 1969-70 was Rs. 50,000.00, an increase of Rs. 34,000.00 over the income from the same source in the year 1965-66. The total expenditure in 1969-70 was Rs. 3,80,000.00. Out of this the amount spent on the academic staff was Rs. 80,000.00,

Rs. 74,500.00 on books and journals, Rs. 58,000.00 on incidentials, travel and honoraria to teachers invited from local and Bombay colleges and departments, and Rs. 73,000.00 on administration.

At present the Centre provides the following facilities :—

1.	Faculty of Arts ..	Economics, Philosophy, History, English, French, Hindi, Marathi, Portuguese, (Subsidiary only) and Education.
2.	Faculty of Science ..	Chemistry (Organic, Inorganic and Physical), Biochemistry and Mathematics.
3.	Faculty of Technology.	Master's degree in Pharmacy.
4.	Faculty of Medicine	M.D., M.S., D.A., D.P.M.

The total teaching staff consists of 3 Professors (one of whom is the Director), 4 Readers, 7 Lecturers and 3 Demonstrators. Of the 17 members of the academic staff, 9 possess a doctorate in their subject.

The total enrolment during the year 1972-73 was 377. Of these 370 enrolled for the degree of M.A., MSc., MEd., and M.Pharm. and 7 are working for PH.D. ; 2 in Marathi, 3 in Chemistry, 1 in Economics and 1 in Philosophy.

Student Enrolment

The total enrolment in the Centre is gradually on the increase. During the academic year 1972-73, the Centre had on its rolls, 377 students, of whom 126 were women students. The following table gives a summary of the enrolments from the year 1965-66 to 1972-73.

TABLE No. 4.—SUMMARY OF

ENROLMENTS FROM 1965-66 TO 1972-73

Year	Arts			Science			Pharmacy			Education			Medicine			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1965-66 ..	36	13	49	18	4	22	..	..	..	..	..	..	..	..	..	54	17	71
1966-67 ..	75	34	109	28	10	38	..	..	..	..	..	..	..	..	..	103	44	147
1967-68 ..	86	46	132	41	10	51	7	..	7	6	2	8	..	..	..	140	58	198
1968-69 ..	90	40	130	50	9	59	4	..	4	12	4	16	..	..	..	156	53	209
1969-70 ..	107	47	154	43	6	49	6	..	6	13	3	16	..	..	..	169	56	225
1970-71 ..	110	56	166	57	9	66	6	..	6	13	2	15	..	..	..	186	67	253
1971-72 ..	121	58	179	50	18	68	13	..	13	10	4	14	24	8	32	218	88	306
1972-73 ..	133	80	213	61	17	78	9	1	10	10	11	21	38	17	55	251	126	377

PROFESSIONAL AND TECHNICAL EDUCATION

In the district there is no separate Department of Technical Education. The matters regarding professional and technical education come under the purview of the Directorate of Education. There is one Engineering College, one Medical College, one Pharmacy College, one Commerce and Economics College and one Institute of Education, all located at Panaji. Besides there are two Commerce colleges located at Margao and Mapusa each and a college of Arts and Commerce located at Vasco-da-Gama. There is also a Government Primary Teacher's Training College at Provorim, a Seva Samaj Sangh Primary Teacher's Training College and a Diploma Education Training College, both at Margao. A Food Craft Institute is located at Alto-Provorim.

Besides the Engineering College which conducts degree courses in Civil, Mechanical and Electrical branches, located at Farmagudi, Ponda, there is one Polytechnic that conducts Diploma Courses in the above branches at Panaji. There is also an Industrial Training Institute at Farmagudi, Ponda. Besides, there are three High Schools that provide instruction to students offering technical subjects. These High Schools are located at Panaji, Margao and Mapusa.

Schools for Music, Painting, etc.

In the district, there are five music schools namely, 'Academia de Musica' formed in 1953 at Panaji and now merged into the Kala Academy at Panaji as its Western Music Wing; 'Idol of Music' founded in 1954 at Margao; 'Swarmanch' founded in 1965 at Margao; 'Gomant Zankar' founded in 1965 at Margao and a 'Sangeet Vidyalaya' started recently by the Kala Academy, at Panaji.

Adult Literacy and Social Education

The scheme of eradication of illiteracy was introduced in the Union Territory of Goa, Daman and Diu in the year 1964-65 and has been implemented since then. During 1974-75, 220 literacy centres were conducted in the district, with a view to achieving literacy amongst illiterate adults. During the current year, approximately 7,000 adults were benefited under the Pilot Literacy Projects.

Physical Education

During the year 1972-73, Government granted recognition to 15 sports clubs. During the same year 60 clubs have applied for grants amounting to Rs. 21,000,00. Grants amounting to Rs. 75,000·00 are also to be paid for the development of playing grounds and stadium.

CULTURAL, LITERACY AND SCIENTIFIC SOCIETIES

In the district of Goa there are about twenty-five Cultural and Literacy Societies, a list of which is given below:—

1. Gomant Vidya Niketam, Margao.
2. Swarmanch, Margao.
3. Swami Vivekananda Society, Panaji.
4. Gomantak Maratha Samaj, Mala, Panaji.
5. Kanand Sangh, Vasco-da-Gama.
6. Kanand Sangh, Margao.
7. Kanand Sangh, Panaji.
8. Mohan Orchestra, Vasco-da-Gama.
9. Gomant Zankar, Margao.
10. Music Circle, Margao.
11. Music Academy, Panaji.
12. Kala Academy, Panaji.
13. Institute Manezes Braganza, Panaji.
14. Kerala Samaj, Panaji
15. Pratibha Friends Circle, Bori, Ponda.
16. Sanskrit Pracharini Sabha, Margao
17. Gomantak Sanskrit Parishad, Mhardol.
18. Gomantak Sahitya Sevak Mandal, Panaji
19. Gomantak Granthalaya Sangh, Panaji.
20. Konkani Bhasha Mandal, Margao.
21. Goa Rashtrabhasha Prachar Samiti, Margao
22. Gomantak Rashtrabhasha Sabha, Margao
23. Yuwak Sangh, Mapusa.
24. Gomantak Sanskrutottejak Mandal, Queula, Ponda and
25. Shri Vedashtra Sanvardhak Mandal, Ambedem, Satari.

The activities of some of the major institutes have been described in Chapter 18-Public Life and Voluntary Social Service Organisations.

CULTURAL, LITERACY AND SCIENTIFIC PERIODICALS

A number of cultural, literacy and scientific periodicals are published from the district. A list of a few of them are given below :—

1. 'Bharat Mitra" Marathi, edited and published by N. B. Naik, Rivona.
2. 'Clinicion' English, published by David Lopes Menezes, Panaji.
3. 'Globo' Portuguese, edited by Antonio de Menezes Panaji.
4. 'Goa Today' English, edited and published by Lambert Mascarenhas, Panaji.
5. 'Nave Parva' Marathi, English and Konkani Government of Goa, Daman and Diu-Panaji
6. "Renovacao' Portuguese edited by L. V. Coutinho, Pilar.

7. 'A India' Portuguese, edited by Leonor de Loyola, Margaon.

8. 'Porjecho Adhar' Elgiish, Konkani and Portuguese Edited by A. F. B. Pereira Vaz, Mapusa.

9. "Vanguarda' English, Konkani Edited and published by Bonifacio Dias, Mapusa.

10. "Vauraddeancho Ixtt" Konkani edited by Rev. Jeronimo Pereira, Pilar.

Libraries and Museums

There are 106 Libraries including the Central Library run by the Government at Panaji. Seven of these are run by the Municipalities and the remaining are private aided. The Central Library was started in the year 1832 under the name of 'Biblioteca Nacional Vasco da Gama'. It was renamed after Libration as 'Central Library'. The above libraries covered approximately 5,86,157 readers during the year 1973-74.

ARCHIVES, ARCHAEOLOGY AND MUSEUM

Development of Archives and Archaeology (Museum)

Goa has got a long historical and cultural heritage. The Department of Archives and Archaeology and Museum deals with the maintenance and preservation of the records of the various Government Agencies according to the Archival Principles. During the past two years the Goa Archives Department has been developed into a combined Department of Historical Archives, Archaeology and Museum and it deals with the protection and maintenance of ancient monuments and antiquities. The records of the Portuguese Government were organised into Archives Department in 1596 by its first Keeper of Records and the well-known Historian of Asia Diogo do Couto. It was named as 'Torre do Tombo do Estado da India' after the name of the Central Archives at Lisbon in Portugal, namely 'Torre do Tombo de Lisboa'. The Portuguese word "Torre' in the name of the Archives Office means Tower and refers to the Tower of the Castle of Lisbon where records were originally stored in Portugal during the 15th century. The word 'Tombo' means collection or inventory of records or State papers.

The Archives Office remained attached to the office of the Portuguese Viceroy of India and formed part of the Secretariat of the State. In 1930, its name was changed to 'Arquivo Geral e Historico da India'. In 1937, it was renamed as 'Cartorio do Governo Geral do Estado da India'. It was developed into a separate Directorate of Historical Archives by the efforts of the late Dr. P. S. S. Pissurlencar in 1953, and named as 'Arquivo Historico do Estado da India'. Since the Liberation of Goa it is now called as Historical Archives of Goa or the Goa Archives (Goa Purabhilekha). The records contained in the Archives repository

include valuable source material of the history of Goa and its relations with South East Asian and African countries under the Portuguese domination. They belong to the early part of the 16th century, and are useful for the history of European expansion in Asia during the colonial period. On the date of Liberation, the repository comprised records extending over 20,000 volumes. During the past few years records of the erstwhile Portuguese regime extending over 40,000 volume have been centralised in the repository. After the centralization of all the records of the former regime which are still lying with some of the Government offices, the total volume of the records will extend over 1,00,000 volumes.

The Archives Schemes

Management of Records.—As a result of Liberation, it was felt necessary to centralise all the records for the past regime in the repository for their maintenance and upkeep. These records are required to be processed from the point of Archival Management, Preservation, etc. and the plan scheme is therefore drawn up for the management of at least part of the bulk of records within the limited financial sources available for such schemes.

The records centralised in the Archives during ten years are in loose bulk i.e. notes, processes, files, etc. The scheme envisages their listing, weeding out, arrangements into volumes and assessing as per principles of Archives Management.

Publication of Records.—The thousands of volumes of records contained in the Archives Office and those centralised during the past 10 years require to be inventorised, catalogued and indexed from the archival point of view to facilitate the work of search of reference required by the Government Agencies and also Scholars.

The scheme aims at the preparation of reference media for the Records in Archives Office. The records provide source material for the social, political and religious history of the people. The work of the preparation of selection of documents from important series of the collection of the record for their publication alongwith notes also forms part of this scheme.

Two selections of records from the following series of records were prepared in 1975-76 :—

(*a*) The Portuguese documents about the Council of Revenue extending over 200 typed pages ; and

(*b*) The Bassein campaign of the Marathas against the Portuguese—Transcripts of 100 Modi documents in Nagari script were prepared under the plan scheme.

Preservation of Records and purchase of private documents.—The huge bulk of records, centralised in the Archives Office since Liberation requires to be processed from the point of its scientific preservation.

The scheme envisages disinfection of all the records centralised during the past ten years and also for their Scientific arrangement in boxes, etc. The leather used in the covers of the Files gets deteriorated and a programme of leather preservative will be also undertaken. Some of the series of records will be also microfilmed according to the availability of raw films.

Private family collections of records will be purchased as per resolution of the Indian Historical Records Commission, if offered for sale. Attempt will be also made to prepare lists of documents in private collection, if permitted by the owner.

The deacidification of highly acidic papers by *Barrow method* was introduced on experimental basis and the results were satisfactory. The Unit was equipped with chemicals required for photo-duplication of documents. It will be soon possible for the Unit to cater to the needs of the public for photocopies and also microfilms.

Extension to the existing Archives Building.—The records already centralised during the past 10 years are stored in three different buildings. The Advisory Committee for Archives appointed in 1963, recommended that there should be a separate Archives Building for storing the records at one place on scientific basis. The work of the extension of the existing building had already made beginning by the end of the Fourth Five-Year Plan and will be continued during the Fifth Five-Year Plan and completed in phases.

Development of Reference Library

The Archives Department is now being reorganised into a combined Department of Archives and Archaeology and Museum. It is thus felt necessary to organise the Reference Library for the use of the Officers of Department and also scholars.

The Reference Books required for the study of the ancient records, art, architecture and antiquities of Goa, will be purchased under the scheme according to their availability in the market.

The Reference Library will cater the need of the research students studying the Archives. It will also facilitate the research publication work undertaken by the Department.

Archaeology and Museum

No systematic exploration of the Union Territory from the point of its archaeological heritage has been carried out so far. In ancient times the territory of Goa was administered from Chandor (Salcete), Goa Velha i.e. Gopaka pattan and Old Goa. Besides, there are some early medieval sites of Archaeological interest which will have to be excavated.

A villagewise survey of ancient monuments, antiquities and art objects will be undertaken. If possible one of the ancient sites will be excavated during the Fifth Plan period.

Beautification of protected monuments by laying down gardens, etc.— There are many ancient monuments, temples, churches, etc. of tourist interest in the Union Territory. After their protection under the State Law, they will be beautified by laying down gardens in the protected areas around them.

The work of beautification of some of the monuments will be undertaken after their declaration as ancient monuments under the State Act in 1976-77.

State Museum

It is felt necessary to develop Central Museum for Goa, Daman and Diu, depicting Goan art, architecture and cultural tradition. It will also serve the purpose of attracting tourists to visit the territory.

The prospective Museum in its fullfledged form will be organised into the following Galleries :—

(1) Ancient History and Archaeology	(2) Art and Craft
(3) Picture Gallery	(4) Anthropology
(5) Geology	(6) Agriculture
(7) Forestry	(8) Natural History.

The Museum at present has in its possession a fairly large collection of objects representative of first four Galleries and these objects are exhibited in Ashirvad Building, St. Inez, Panaji, in seven halls.

Key Gallery.—In this hall are exhibited the best specimens of each class of objects such as ancient epigraphs, stone sculptures, bronzes, miniature paintings and old manuscripts in sanskrit and regional languages. The stone inscription of the Maratha ruler Sambhaji, a beautiful piece of earthenware *Tulasivrindavan*, a stone image of God Ganesha, wooden statues of a Brahmin priest and his wife and a Christian Saint, will attract the attention of the visitors. A small metallic head of Lord Buddha, more than a thousand years old, two bronze panels of warriors and a miniature painting and a small brass model of cannon are also displayed here.

Ancient History and Sculptures.—This section starts with the display of photographs of Copperplate inscriptions which date from the 4th century A. D. to 11th century A. D. Next to them are five stone inscriptions dating from 6th century A. D. to 16th century A. D. Sculpture of Yakshi exhibited in the middle is remarkable.

The section further includes sculpture of Goddess of wealth *Gajalakshmi*, God Shiva with four faces and Goddess killing buffalo demon *Mahishasuramardini*. A few small rare sculptures are also displayed in the showcase.

It also includes a serpent of God *Nagdeva*, image of sun *Surya*, another form of sun God *Martanda Bhairava*. The last two are best pieces of skill and workmanship of the sculptor. A number of *Sati* stones which are historically as well as anthropologically important are also exhibited here.

Paintings and Manuscripts.—In the next hall are seen miniature paintings on paper and two beautiful glass paintings, out of which the glass painting of Akkadevi, the wife of Kadamba ruler Shashthadeva II is attractive. The Museum possesses a collection of five hundred old manuscripts. Some manuscripts of Vedic literature including Vedas, Vedangas, Brahmanas, Upanishads and also Puranas are on display in this hall. A collection of the coins of different dynasties exhibited here will be of much interest to the visitors as well as numismatists.

Anthropology.—This section gives some idea of the life of the people of Goa. A number of models of agricultural implements, brass utensils, a group of musical instruments, ivory pieces from Diu, wooden set of games, coconut photo frames, textiles and beautiful clay models representing different occupations are housed in this hall. They are good specimens of handicrafts of Goan artists. To the above is appended a collection of old photographs which show peculiar types of costumes, ornaments, festivals and religious and social customs of the people of the territory.

Western Art.—This includes wooden statues of saints, Bishops and the first Pope Saint Peter. Some old paintings on wood representing the events in the life of Christ are also exhibited here. Pieta and an ivory statue of Menino Jesus, more than three hundred years old are excellent specimens of Western art. So is a wooden door panel, on which are carved the events in the life of Christ. Rare is a magnificent historic silken flag embroidered by the nuns of Santa Monica Monastery indicating the Portuguese victory at the Mormugao Port over the Dutch in 1638. A copper plate oil painting probably of a flemish painter, from this collection is rare and valuable.

There are also some more interesting specimens in the reserve collection of the Museum and they are always accessible for the curious visitor on his request. This collection, it is hoped, will give a fair idea of the prospective museum, which is to be set up in the proposed museum building in Panaji. Steps are being taken to acquire the site admeasuring ten thousand square metres area and when it is acquired construction of the museum building will be expedited. The built-up area will cover

approximately 3,000 square metres of the land. The building will comprise of ten galleries, spacious store-rooms for reserve collection, an auditorium, a reference library and laboratories for photography and preservation. There will also be an open air museum for cannons which are at present scattered all over the territory.[1]

Museum Building.—The museum activity is highly technical and the Museum requires to be housed in its own building for its scientific arrangement.

Necessary steps are being taken for the acquisition of land extending over 10,000 square metres opposite the Archives building at Rua de Ourem, Panaji, for the construction of the specially designed building for the State Museum.

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[1]Besides the State Museum there is a Museum organised by the Archaeological Survey of India at Old Goa which may be seen in Chapter 19.

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CHAPTER 16—MEDICAL AND PUBLIC HEALTH SERVICES

HISTORICAL BACKGROUND

In ancient times, all sorts of ailments were generally ascribed to the influence of evil spirits and stars rather than considering them to be physical disorders and the most natural cure was to propogate sacrifice to ward off evil spirits. However, a few of the population that considered illness to be a physical disorder were treated under the system of medicine known as the ayurvedic system.

This system was based upon *nadi pariksha* or the reading of the pulse. Those who practised in this system of medicine were known as *Vaidyas*. They generally gained their knowledge from their forefathers and from the practical experience they got during their life-time. As is clearly brought out by the Sanskrit treatises like the *Sushruta* and the *Vagbhata* these *Vaidyas* had the knowledge of chemistry as is evident from the use of *ras* and *bhasma*. They also possessed a good knowledge of rare medicinal herbs.

With the establishment of the Mughal rule in India, the system of medicine known as the *Unani* system also made its stride in the country. Those who practised in this system of medicine were known as *hakims*. This system had its roots in Arabia in the doctrine of Hypocrates, the celebrated Greek physician known popularly as the father of medicine. These two systems of medicine viz. *ayurvedic* and *unani*, were in vogue in the district when it became the part of the Portuguese empire in the sixteenth century. The *vaidyas* as also the *hakims* were held in high esteem even by the Portuguese authorities. They used to receive handsome remuneration from their patients and were entitled to special privileges from the authorities, like going about under *sombreiros*, big colourful umbrellas, or being carried in palanquins or riding on horseback. It must be remembered that in those days ambassadors, high ranking Portuguese Fidalgos (Noblemen) and a few rich native merchants, only, were entitled to such privileges. Unfortunately, such special privileges granted to the natives were disliked by some Portuguese people and added to it, religious persecution of the non-christians also began at about the same time. As such, the privileges were cancelled and some of the brilliant native medical practitioners fled away to neighbouring territories by the middle of the 16th century to save themselves from the torture at the hands of the Portuguese.

The population was growing rapidly and the Portuguese Government could not provide adequate medical and sanitary relief even to their capital cities. As a result, within the span of two centuries, Goa, known as one of the world's richest and most magnificent commercial emporium of that time, saw its tragic downfall.

However, a few graduates of the University of Coimbra, one of the most famous seats of education in Europe at that time, were sent by the Portuguese kings as fisicomores i.e. Chief Physicists or cirurgioes-mores i.e. Chief Civil Surgeons and their ability was recognised not only in Goa but in various Indian courts where they were called upon to treat members of the royal families. Besides the medical aid they gave to the people in their private capacity and in the hospitals, their most creditable work was the training of local intelligencia and receptive minded youth in medicine.

According to some sources it is probable that training in medical sciences commenced in the 17th century itself in the ' Colegio de S. Paulo, of the Jesuits. However, the earliest confirmed attempt to teach medicine on a regular basis in Goa was made in 1702 when the fisicomore, Dr. Cipriano Valadares, started the first Medical Course in the ' Hospital Real ' at Old Goa. This course continued with light interruptions until the ' Escola Medico-Cirurgica ' was formally opened at Nova Goa in 1842. Many a student getting qualified with the diploma of ' Medico por Sua Magestade, on its completion, carried some relief badly needed by th sick throughout the district.

Institutional medical assistance was provided in the city of Goa by five hospitals built in the 16th century. They were well-equipped and well administered according to the standards of those days. One of them, the ' Hospital Real ', with luxurious installations was opened in 1511. This was regularly functioning since 1520 and was considered not only the largest and the best in the East, but one of the best in the world by many foreign travellers who visited it.

Malaria that broke out in an epidemic form took toll in thousands and made the city of Goa a deserted place. It compelled the Viceroy and his court to transfer their residences and office to Panelim in 1695 and thereafter to Panaji in 1759, the latter of which became the capital of the Portuguese settlements, in India on 22nd March, 1843. Till then, medical assistance was rendered only in the hospitals through available fisicos (physicians), cirurgioes (surgeons), boticarios (apothecaries) and sangradoria (phlebetomists) sent from Portugal, aided by those locally recruited.

During the middle of the 19th century, foundations of Medical and Public Health Services were laid. The Health Cadre was created by the Decree of September 14, 1844. This was reorganised by the Decree of

December 2, 1869. According to that, six physicians who graduated with Honours in Portuguese Universities were appointed to strengthen the Services. They had to teach medicine in the School and treat patients in the hospitals at Panaji. Besides these, two pharmacists were appointed in the hospital at Panaji.

In addition to the hospital of the Medical School (old Hospital Real later designated as Hospital Central), the 'Hospital de Todos os Santos' started by the 'Santa Casa de Misericordia' in 1547 was shifted in 1851 to Ribandar where it is still functioning. Before shifting to Ribandar it functioned at Chimbel for sometime. Later, in 1867, another one was opened at Margao by some charity association called 'Hospicio de Sagrado Coracao de Maria' with the funds raised by Rev. Fr. Antonio Joao de Miranda.

The following describes in brief the condition about the hospitals existing in the year 1878 :—

> " Of the two hospitals in Goa, one called Hospital Militar de Goa, is situated at Panjim, and is intended for military men ; the other, called Hospital da Santa Casa de Misericordia, or Holy House of Mercy, situated at Ribandar, for poor and destitute native. The former which is supported by Government, admits also, by special sanction Government servants on forfeiting a portion of their pay, and in 1871 contained 2,232 patients. The latter had in the same year on its roll 290 patients, of whom 152 were males and 137 females. "

> " The first building which we see just on the borders of Raibunder near the riverside, is the Hospital of the Poor. It has a pretty appearance, but has scanty accommodations for the establishment which was transferred there by the Santa Casa de Misericordia in 1851. In every ward, whether set apart for male or female patients, a crucifix is hung. There is a chapel, with a chaplain residing in the house. The hospital is not in a flourishing condition, and is only resorted to by the natives of the neighbouring villages of the Ilhas. "[1]

A post of Delegado de Saude (Health Officer) was created at the rate of one for each concelho to give medical and sanitary aid to the people of those areas, by the Decree of 28th May, 1895. Subsequently, their number was increased according to the requirements.

Compulsory small pox vaccination and revaccination after every seven years, was introduced by *Portaria* dated 24th July, 1896 and measures were initiated for the preparation of the vaccine. In 1957 revaccination was made compulsory after every three years.

During the first half of the twentieth century, the sanitary organisation was further strengthened. In 1907, ' Instituto de Pasteur ' was established

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[1] Fonseca, J. N. de., *op.cit* pp. 61-62 and p. 328.

which later on underwent several changes. In 1959, it was finally divided into two institutions namely, Laboratorio de Analises (present Public Health Laboratory) for analysis and Parque Vacinogenico (present Vaccine Institute) for producing biological products. Training courses in Nursing and Midwifery were first started in 1921 at Panaji hospital and then at the hospitals at Ribandar and Margao in 1923. In 1945, one more general hospital was opened at Mapusa by a charity association called ' Asilo de N. Sra. dos Milagres, ' with the subsidy from the Government and contribution from local well-to-do people. As per the census of 1921, there were 216 doctors and 57 chemists in the entire territory.

Attempts were also made to establish special centres for institutional treatment of lepers and patients suffering from pulmonary tuberculosis and mental diseases. Leprosaria (Lepers Asylum) was set up in 1930 in Macasana with the funds collected through public subscription by the late Dr. Froilano de Melo, and the Government subsidy.

' Leprosaria ' was a treatment-*cum*-segregation Centre for two hundred lepers with an attached agricultural farming colony. ' Santa Casa de Misericordia ' opened during the same year at Chimbel, the ' Asilo de Alienados, ' an asylum for lunatics which in 1957 was shifted to Panaji in a new building constructed by the ' Provedoria ' under the name ' Hospital Abade Faria ' which was transferred to the Government in 1958. ' Santa Casa ' maintained for some time in its hospital at Ribandar, a separate ward for T. B. patients. A special building to accommodate T.B. patients was constructed on the hill behind the Ribandar Hospital, before 1935. The first specific institution for this purpose was opened in 1935 by ' Hospicio de Margao ' at Margao and was called ' Sanatorio de S. Jose '. It was transferred first in 1954 to an institution called A.T.I.P. (Associacao Tuberculosa da India Portuguesa). Since 1956 it is run by the Government.

In 1936, the ' Instituto de Radiologia ', a centre for diagnosis and treatment of X-rays was started at Panaji and the same is still functioning. In 1947, a public assistance institution (Provedoria de Assistancia Publica) started functioning and the Asylum for lunatics at Chimbel was placed under it. A Maternal and Child Health Programme was also developed by establishing centres under midwives in regions where sufficient medical aid was not available.

Some significant changes were introduced in the Health Cadres from the enforcement of two Decrees, namely (1) the Decree No. 34417 of 21 February, 1945, which reorganised the Health Services of all the Portuguese Overseas Provinces and (2) the Decree No. 35610 of 24th April, 1946, which separated the Health Department from the Medical School which had since its inception, a joint administration and common staff.

During the fifties of this century, the Portuguese Government made speedy advance in providing further medical facilities. The Malaria and the Filaria Control Programme were introduced. Two chest clinics namely ' Dispensario-anti-tuberculoso de Virgem Peregrina ' at Santa-Inez Panaji with twenty-five beds started by ' Provedoria ' on February 1, 1950 transferred to A.T.I.P. in 1954 and subsequently to Government in 1956 and ' dispensario ' at Mapusa with fifteen beds started in the building constructed with the funds donated by Mapusa Municipality and Comunidades Mapusa and run by the Government since 1959, were established. The T. B. Control Programme was also started in 1959 with a miniature X-Ray, survey and B.C.G. vaccination units. Both the above mentioned dispensaries were utilised as centres for detection and treatment of T.B. patients. Four regional hospitals were opened at Sanguem, Ponda, Sanquelim and Vasco-da-Gama. Eight Sanitary posts in charge of a male nurse each were also opened in the mining areas for the benefit of the labourers and the local populace. Surgical facilities and specialised services were also enhanced through the Army medical personnel in hospitals in the district, specially in Ribandar hospital.

At the time of Liberation, the district of Goa had sixteen sanitary jurisdictions. In the urban areas some hospitals and health centres were provided. But the rural areas were very much neglected as regards medical facilities. There were four general hospitals including the three run by voluntary agencies aided by Government, four regional hospitals, three T.B. hospitals, three isolation hospitals, a mental hospital and a leprosy hospital with a total bed-strength of 1,044.

The towns of Panaji, Margao and Vasco-da-Gama and some villages were provided with treated water supply. The teaching of modern medicine was started in this territory in the 17th century itself. The Medical School at Panaji, which happens to be the first in India, was started in 1842. There was also a Pharmacy School, a Blood Bank, a Radiology Institute, a Public Health Laboratory and a Vaccine Institute at Panaji.

After Liberation, there was a radical change in the outlook of the administration. The concept of administration underwent a change from a police state to that of a welfare state. With a view to promoting general welfare and well-being of the people, the Government gave priority to extending health facilities to all corners of the district. Medical assistance was made free and was also made available to all without distinction. All the villages were provided with facilities for medical relief and assistance in maintaining public health by expanding the existing hospitals with better equipments, buildings and more beds and by starting new hospitals and new rural medical dispensaries and also by reorganising the Health Services on the pattern of primary health centres with

sub-centres. A number of programmes for the control and eradication of diseases, particularly communicable diseases on the national pattern were launched. Some health promotional programmes were also introduced

The old Medical School and the Pharmacy School were converted into full-fledged Medical College and Pharmacy College, respectively. To promote education in nursing in the district, two basic nursing schools were set up. Besides these, four Auxiliary Nurse Midwife Schools were also started. Of these only two are still functioning.

VITAL STATISTICS

The population of the district as per the Census of 1881 was placed at 4,13,727. As per the Census of 1971, it was estimated at 7,94,530 showing a rise of about 92.04 per cent over the population reported as per the Census of 1881.

The following table gives the marriages, births and deaths and balance of live-births and deaths from 1961 to 1972.

TABLE No. 1.—TABLE GIVING THE MARRIAGES, BIRTHS AND DEATHS AND BALANCE OF LIVE-BIRTHS AND DEATHS (1961-72).

Year/District	Marriage	Per 1000 population	Live-birth	Per 1,000 population	Still birth	Per 1,000 live-births	Death				Balance of live-births and deaths	Per 1,000 Population
								Per 1,000 population	Deaths during 1st year of life	Per 1,000 live-births		
1	2	3	4	5	6	7	8	9	10	11	12	13
Goa—												
1961 ..	3,660	6·18	18,835	31·81	319	16·94	7,994	13·50	319	70·03	10,841	18·31
1962 ..	3,916	6·57	14,461	24·25	391	27·04	7,530	12·63	1,079	74·61	6,931	11·62
1963 ..	3,724	6·20	13,203	21.98	431	32·64	7,146	11·90	1.012	76·65	6,057	10·08
1964 ..	3,728	6·16	12,749	21·08	428	33·57	7,293	12·08	1,203	94·36	5,456	9·02
1965 ..	3,329	5·47	14,514	23·83	436	30·04	7,211	11·84	1.105	76·13	7,303	11·99
1966 ..	3,713	6·05	14,634	23·86	464	31·71	6,944	11·32	1.032	70·52	7,690	12·54
1967 ..	3,993	6·56	15,947	26·16	384	24·12	6,670	10·92	987	61·73	9.277	15·23
1968 ..	2,985	4·88	17,433	28·50	446	25·58	6,965	11·39	1,078	61·84	10,468	17·12
1969 ..	3,681	5·99	16,068	26·15	429	26·70	7,268	11·83	995	61·92	8,800	14·32
1970 ..	3,485	5·64	16,303	26·41	361	22·14	7,026	11·38	860	52·75	9,277	15·03
1971 ..	3,810	4.73	19,789	24·60	436	22·03	7,441	9·25	1,080	54·58	12,348	15·35
1972 ..	3,986	4·86	21,389	26·22	393	18·37	7,048	8·64	993	46·42	14,341	17·58

The following table gives the key vital rates for the district of Goa, from 1971 to 1975.

TABLE No. 2.—KEY VITAL RATES

District/Year	Live birth rates	Death rates	Infant death rates
1	2	3	4
1971 ..	24·60	9·25	54·58
1972 ..	26·22	8·64	46·42
1973 ..	27·12	8·91	48·61
1974 ..	26·72	9·38	44·23
1975 ..	26·85	9·24	43·02

The following statement gives rural and urban information about infant mortality in the district during 1975.

District	Deaths during the 1st months						Deaths during the 1st year of age					
	Total		Rural		Urban		Total		Rural		Urban	
	M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13
Goa . ..	337	237	126	90	211	147	251	271	137	162	114	109

The following table gives the number of deaths due to different diseases durL.ig 1975.—

TABLE No. 3.—DEATHS DUE TO DIFFERENT DISEASES DURING 1975 IN GOA DISTRICT

Causes of death	Male	Female	Total
Typhoid fever	2	3	5
Bacillary dysentry and amoebiasis ..	10	10	20
Enteritis and other diarrhoeal diseases ..	92	82	174
Tuberculosis of respiratory system ..	330	147	477
Tuberculosis of meninges and central nervous system.	12	11	23
Tuberculosis of intestines, peritoneum and mesenteric glands.	1	4	5
Tuberculosis of bones and joints ..	1	..	1
Other tuberculosis, including late effects ..	4	..	4
Leprosy	2	..	2
Diphtheria	..	1	1
Whooping cough	7	4	11

TABLE No. 3—contd.

Causes of death	Male	Female	Total
Tetanus	60	43	103
Other bacterial diseases	32	21	53
Acute poliomyelitis	..	1	1
Measles	3	5	8
Yellow fever	..	1	1
Viral encephalitis	4	2	6
Infectious hepatitis	4	2	6
Other viral diseases	22	14	36
Typhus and other rickettsioses	1	..	1
Malaria	1	1	2
Congenital syphilis	..	1	1
Early syphilis, symptomatis	1	..	1
Gonococcal infections	1	..	1
Other helminthiases	3	6	9
All other infective and parasitic diseases ..	28	26	54
Malignant neophasm of buccal cavity and pharynx	25	12	37
Malignant neoplasm of oesophagus ..	26	5	31
Malignant neoplasm of stomach ..	65	34	99
Malignant neoplasm of intestine, except rectum	6	5	11
Malignant neoplasm of rectum and rectosigmoid junction	3	3	6
Malignant neoplasm of larynx ..	5	..	5
Malignant neoplasm of trachea, bronchus and lung	25	12	37
Malignant neoplasm of bone	..	2	2
Malignant neoplasm of cervix uteri ..	..	10	10
Malignant neoplasm of breast ..	..	8	8
Other malignant neoplasm of uterus ..	..	8	8
Malignant neoplasm of prostate ..	4	..	4
Malignant neoplasm of other and unspecified sites	74	56	130
Leukaemia	8	1	9
Other neoplasms of lymphatic and haemotopoietic tissue	2	1	3
Benign neoplasms and neoplasms of unspecified nature	15	21	36
Diabetes mellitus	27	25	52
Avitaminoses and other nutritional deficiency	63	70	133

TABLE No. 3—contd.

Causes of death	Male	Female	Total
Other endocrine and metabolic diseases ..	7	14	21
Anaemias	50	70	120
Other diseases of blood and blood-forming organs	1	3	4
Psychoses	4	3	7
Neuroses, personality disorders and other non-psychotic mental disorders	17	3	20
Mental retardation	2	..	2
Meningitis	26	22	48
Epilepsy	9	8	17
Other diseases of nervous system and sense organs	98	81	179
Active rheumatic fever	2	3	5
Chronic rheumatic heart disease ..	3	4	7
Hypertensive disease	61	75	136
Ischaemic heart disease	231	104	335
Other forms of heart disease	600	453	1053
Cerebrovascular disease	377	348	725
Diseases of arteries, arterioles and capillaries	21	16	37
Venous thrombosis and embolism ..	2	5	7
Other diseases of circulatory system ..	21	17	38
Acute respiratory infections	18	15	33
Influenza	1	5	6
Other pneumonia	224	200	424
Bronchitis, emphysema and asthma ..	125	128	253
Hypertrophy of tonsils and adenoids ..	1	..	1
Empyema and abscess of lung ..	5	..	5
Other diseases of respiratory system ..	53	37	90
Diseases of teeth and supporting structures	..	1	1
Peptic ulcer	17	8	25
Gastritis and duodenitis	1	2	3
Intestinal obstruction and hernia ..	6	4	10
Cirrhosis of liver	111	58	169
Other dieseases of digestive system ..	96	78	174
Acute nephritis	2	5	7
Other nephritis and nephrosis	61	77	138
Infections of kidney	3	..	3
Hyperplasia of prostate	1	..	1
Other diseases of genito-urinary system ..	22	12	34
Toxaemias of pregnancy and the puerperium	..	5	5

TABLE No. 3—*contd.*

Causes of death	Male	Female	Total
Haemorrhage of pregnancy and childbirth ..	..	7	7
Other and unspecified abortion ..	..	4	4
Sepsis of childbirth and the puerperium ..	..	1	1
Other complications of pregnancy, childbirth and the puerperium.	..	1	1
Delivery without mention of complication ..	..	3	3
Infections of skin and subcutaneous tissue ..	1	2	3
Other diseases of skin and subcutaneous tissue.	1	2	3
Arthritis and spondylitis	..	1	1
Non-articular rheumatism and rheumatism unspecified.	1	3	4
Congenital anomalies of heart ..	6	4	10
All other congenital anomalies	10	3	13
Birth injury and difficult labour ..	2	..	2
Anoxic and hyphxic conditions not elsewhere classified.	20	9	29
Other causes of perinatal morbidity and mortality.	183	144	327
Senility without mention of psychosis ..	542	638	1,180
Symptoms and other ill-defined conditions	505	406	911
"AE CODE"			
Motor vehicle accidents	1	2	3
Other transport accidents	5	2	7
Accidental poisoning	17	11	28
Accidental falls	5	3	8
Accidents caused by fires	11	25	36
Accidental drowning and submersion ..	55	34	89
Accident caused by firearm missiles ..	1	..	1
Accidents mainly of industrial type ..	3	2	5
All other accidents	72	23	95
Suicide and self inflicted injury ..	12	2	14
Homicide and injury purposely inflicted by other persons legal intervention.	4	1	5
Injury undetermined whether accidentally or purposely inflicted.	3	..	3
Injury resulting from operations of war ..	1	..	1
Fracture of skull	7	1	8
Fracture of spine and trunk	16	3	19

TABLE No. 3—*contd.*

Causes of death	Male	Female	Total
"AN CODE"			
Fracture of limbs	3	2	5
Intra cranial injury (including skull fracture)	18	4	22
Internal injury of chest, abdomen and pelvis.	5	..	5
Superficial injury, contusion and crushing with intact skin surface.	1	..	1
Foreign body entering through orifice ..	1	..	1
Burns	12	21	33
Adverse effects of chemical substances ..	3	2	5
All other and unspecified effects of external causes.	124	72	196
Total ..	4,899	3,960	8,859

CONTROL OF COMMUNICABLE DISEASES

With a view to controlling the communicable diseases in the district, a number of control and eradication programmes were introduced on a pattern followed all over the country.

Malaria Eradication Programme

The first such programme to be launched in the district was that of Malaria Eradication. This disease is mainly a problem of the hill areas. The half unit organisation allotted with slight modifications in 1963 progressed very successfully, completing the attack phase in 1966, the consolidation phase in 1969 and in April of the same year it entered into the maintenance phase.

During the consolidation phase, the work done in Goa was as follows:—

Under Active Surveillance, 41638 fever cases were detected, and 41,505 blood smears were collected and examined.

Under Passive Surveillance, 21,131 blood smears were collected by all the hospitals, Primary Health Centres and Rural dispensaries in the district.

All these slides were sent to the Laboratory of National Malaria Eradication Programme Unit, Margao, where they were examined.

In all, 9 positive cases were found, none of which was indigenous.

In 1971, the organisation collected 9,764 blood smears under active surveillance and 13,311 under passive surveillance, whereas in the year 1972, 12,791 blood smears under active surveillance and 16,507 under passive surveillance were collected. The number of positive cases detected in 1971 was 32 as compared to 201 positive cases detected in 1972. Till

December 1974, 35,504 blood smears under passive, active and mass surveillance were collected and 89 positive cases were detected.

T. B. Control Programme

Tuberculosis is one of the major public health problems of this district. The disease rate is about 5·5 per cent. The T. B. Control Programme was actually started in 1965 and consists of the following activities *viz.* Diagnostic, Treatment and Preventive.

At the end of 1968, 3,733 patients were under treatment in the various clinics, the break-up of which is as follows :—

	Clinics	No. of patients
1.	T. B. Centre, Panaji	846
2.	T. B. Hospital, Panaji	511
3.	T. B. Hospital, Mapusa ..	398
4.	T. B. Sanatorium, Margao	868
5.	Urban Health Centres	162
6.	Primary Health Centres ..	601
7.	Rural Medical Dispensaries	347
		3,733

During the year 1972, 35,663 persons were vaccinated for B.C.G. and 2,072 new T. B. cases were detected, whereas till December 1974, 32,377 persons were vaccinated for B.C.G. and 1,336 new T. B. cases were detected.

Filaria Control Programme

Filaria Bancrofti prevails in the main towns of the district *viz* Panaji, Mapusa, Margao and Vasco-da-Gama. Micro-filaria was first detected in 1952 and the Control Programme was started in 1960, with the creation of a wing called Anti-Filariasis Campaign. The main feature of the control programme in the district is a mass night blood survey with treatment of carriers of micro-filaria and contacts and also treatment of patients of Elephantiasis or other injuries caused by Filaria, besides the Mosquito Control Programme. The programme was reorganised in the year 1965 on the National pattern with its headquarters at Panaji and 3 A-type units throughout the district, but the main features of the clinic that is mass night blood survey and treatment of carriers and patients was continued. The micro-filaria rate which was 5·3 per cent before 1959 was reduced to 0·9 per cent by 1972. During 1972 under the Filaria Control Programme were undertaken mass blood survey, treatment of carriers, contacts and patients and mosquito control. Blood examination was conducted in respect of 43,108 persons collecting blood samples at night. During the same year, 404 new patients were registered in the Filaria clinic and positive Micro-filaria (new carriers) were found in respect of

122 persons. Till December 1974, 21,122 patients were examined and 72 new micro-filaria carriers have been detected. 76 filaria patients have been registered and treated at the clinic.

Small-pox Eradication Programme

The Small-pox Eradication Programme was launched in 1965 with the attack phase, and from its inception to the end of 1970 covered the entire district of Goa.

House to house enumeration and vaccination of every man, woman and child was done. Besides, according to the sanitary rules in force, all new borns are vaccinated before attaining the age of six months and re-vaccination is done every three years. During the year 1972, the Primary Health Centres throughout the district of Goa, carried out a total of 14,631 vaccinations and 90,220 re-vaccinations.

In the year 1968-69, half unit of National Small-pox Eradication Programme was established. It conducted the attack phase in Sanquelim and Bicholim talukas. Similarly, house to house vaccination had taken place with more emphasis on the vulnerable age group, 0-15 years. Special attention was paid to the mining areas, specially labour and migratory population. On the completion of the attack phase in the above mentioned talukas, the programme was extended to the remaining three talukas *viz.*, Satari, Pernem and Canacona. The attack phase in these talukas was completed by May/June 1969. The vaccinators and numberators under the National Small-pox Eradication Programme was attached to the Urban and Primary Health Centres under the respective Health Offices, after covering the area. During 1972-73, the Programme was continued with house to house vaccination, verifications and re-vaccinations. Till December 1974, more than 26,500 primary vaccinations and about 1,65,000 re-vaccinations were carried out in collaboration with the Primary Health Centres. The active search programme jointly sponsored by Government of India and World Health Organisation is presently under operation.

Leprosy Control Programme

The Leprosy Control Programme was launched in the district in 1964. This programme aims at providing for early detection and treatment of lepers in their homes. It further seeks to control the disease through survey, detection of early cases and mass treatment with sulphone. One Leprosy Control Unit was set up at Panaji. Its jurisdiction extended over the talukas of Bardez and Tiswadi.

During the year 1972, the Leprosy Control Unit at Panaji surveyed a population of 75,147. During the same year 41 new cases were detected and 113 cases were registered for treatment. Throughout the district, 20 Survey Education and Treatment centres were also set up. Till

December 1974, a population of 1,31,355 persons has been surveyed and 182 new leprosy cases have been registered for treatment.

Besides these centres, there is a Leprosy Hospital at Macasana having a bed strength of 150. The hospital was set up for the purpose of isolation of infective cases and rehabilitation of others.

With the aim to control the disease, detection of early cases and mass treatment with sulphone is carried out. A Para-Medical Officer is attached to this Primary Health Centre.

V. D. Control Programme

The V. D. Control Programme was launched in 1963 with a V. D. Clinic at Panaji in which two teams under two Medical Officers are working at present. The main features of this programme have been to conduct surveys specially in the labour areas of port, mines, among residential areas of sweepers and other congested areas and providing treatment to the detected patients.

During 1972, 1,115 people attended the clinic and 5,022 were treated outside. S. T. S. (tests) were conducted in respect of 5,178 persons and out of these, 700 samples were found positive. Besides, field surveys were carried out by the Medical Officers and Laboratory Technicians who conduct regular visits to all Antenatal clinics, Family Planning Centres and hospitals in the district. Over 3,891 blood samples were examined and 516 cases were detected. Till December 1974, 700 patients were examined and treated.

In addition, efforts are being made to check almost all the diseases by providing preventive and curative measures to the general populace as such. Besides the Government hospitals and dispensaries, there are a number of private hospitals, and nursing homes which cater to the needs of the people. There are also a large number of private medical practitioners, and a few homoeopaths also help in rendering assistance to the needy.

PUBLIC HOSPITALS AND DISPENSARIES

During the Portuguese regime, medical assistance was provided to the population by four general hospitals, six regional hospitals, three T. B. hospitals, one mental hospital, one leprosy hospital and three isolation hospitals. A doctor was appointed at the headquarters of each of the 11 ' Concelhos ' and at Panaji, Colem, Reis Magos, Bicholim and Cuncolim. After liberation, the Government strived to extend the health facilities to all the corners of the district, keeping in view the general welfare and well-being of the people. With this in view six cottage hospitals were opened, one each at Canacona, Bicholim, Valpoi, Curchorem, Pernem and Aldona, besides a maternity-*cum*-Family Planning

Centre (hospital) at Margao. With the establishment of a forty bed Infectious Diseases hospital on modern lines at Ponda, the two isolation hospitals, one at Colem and the other at Reis Magos were closed down. The Curchorem hospital was shifted to the newly constructed building at Cacora and is since known as Cacora hospital. This provided all the talukas with at least one hospital.

New buildings were constructed for the hospitals at Valpoi, Sanquelim, Cacora, Pernem and Chicalim. Additional wards were constructed for the hospitals at Bicholim, T. B. hospital at Panaji and T. B. Sanatorium at Margao. Panaji and Ribandar hospitals, under the Goa Medical College Administration, were also expanded and additional staff and equipment was provided. More and better equipment was provided specially to the hospitals at Bicholim and Cacora and the T. B. hospital at Mapusa, T. B. Sanatorium at Margao, the Leprosy hospital at Macasana, the Mental Hospital at Panaji and the other hospitals in general.

Besides the expansion of hospitals by constructing new wards, the bed-strength of these hospitals was reorganised to accommodate more beds in the Mental Hospital, Panaji, T. B. Sanatorium, Margao, Hospicio Hospital, Margao, Asilo Hospital, Mapusa, and the hospitals at Ponda and Sanguem. An Infectious Diseases Hospital started functioning from 1969-70 and 32 beds have been provided. During the year 1970-71, the Mental Hospital, Panaji, treated 1,276 indoor and 5,181 outdoor patients. Its bed strength has risen from 250 before Liberation to 350 at present.

Four dental clinics have been established at Panaji, Margao, Mapusa and Vasco-da-Gama. These clinics treated 1,807, 1,717, 2,012 and 2,322 outdoor patients respectively, during the year 1970-71. A mobile dental van has been provided to cater to the areas where the facilities for dental treatment are not available and during the same year treated 4,016 outdoor patients. Besides these, a mobile eye clinic that provides ophthalmic facilities to the rural areas was started in January 1970. A Medical Officer in charge of the Mobile Eye Clinic extends these services to the rural areas. He has also been entrusted with the work of examining the school children in the rural areas. During the year 1972, 10,214 children were attended to at these clinics.

Three Pediatric wards have been opened, attached to the hospitals at Vasco-da-Gama and Cacora, and the Maternity-*cum*-Family Planning Centre at Sanquelim. The total bed-strength of the Government and Government-aided hospitals during the year 1975-76 was 2,336. This gives a ratio of 2 : 4 beds per thousand population which is higher than the bed ratio for the whole of India. During the same year, 54,607 indoor patients and 6,11,020 outdoor patients were treated.

The opening of 31 rural medical dispensaries in the rural areas marks a great change in approach in the post-liberation period. These rural medical dispensaries provide both preventive and curative assistance to the people. In the year 1972, 1,27,630 patients were treated in these dispensaries.

Primary Health Centres

The old Health Centres were providing preventive and curative services on a limited scale only. They had to be reorganised to provide the seven basic health services namely, medical relief, control of communicable diseases, environmental sanitation, maternal and child health and family planning services, health education and vital statistics. In order to provide these basic health services, the Health Services of the district were recently reorganised on the pattern of Primary Health Centres and consequently now there are four Urban Health Centres and thirteen Primary Health Centres with 47 Sub-Centres. Each Primary Health Centre covers a population of about 40,000 to 50,000. The Primary Health Centres are situated at Pernem, Bicholim, Valpoi, Ponda, Sanguem, Quepem, Canacona, Candolim, Cansaulim, Bali, Curtorim, Aldona and Betqui.

The statement giving the Primary Health Centres with the various sub-centres is given under Appendix 24.

As an initial step, districtwise initial health survey was also launched.

In addition, medical assistance is provided by the special clinics attached to the different health programmes.

Maternal and Child Welfare Programme

The Maternal and Child Welfare Programme was started in 1963. Under this Programme, 28 Maternal and Child Welfare Centres were opened in the rural areas each in charge of a midwife with a view to providing pre-natal and post-natal care. The immunisation programme against polio, tetanus, diphtheria, whooping cough, etc. are also undertaken under the programme. During the year 1972, 7,348 pregnant mothers were assisted, 20,985 nursing mothers were assisted, 36,562 and 76,143 toddlers were also assisted. The total number of patients inspected during the year 1972 were 1,41,038 as against 1,00,443 patients inspected during the year 1971.

The detailed information regarding the hospitals at Panaji and Ribandar is given in Chapter 15 under the Medical College as these hospitals are controlled by that institution.

HEALTH CENTRES

In addition to these hospitals at Panaji and Ribandar, one Urban and one Rural Health Centre at Calapur and Mandur respectively, have been set up and have started functioning for the benefit of the population.

These centres were set up as per the recommendations of the Indian Medical Council with a view to providing Medical Training to M.B.B.S. students in the fields of preventive and social medicine.

There are in all 20 departments in this college. These are Anatomy, Biochemistry, Physiology, Pharmacology, Pathology and Bacteriology Forensic Medicine, Preventive and Social Medicine, Surgery, Obstetrics and Gynaecology, Ear, Nose and Throat, Ophthalmology, Anaesthesiology, Dentistry, Skin and V. D., Orthopaedics Surgery, Psychiatry, Paediatrics, Tuberculosis and Radiology. These departments have museums comprising of drugs, equipments, specimens, charts, photographs and diagrams. The journal, club meetings, clinical discussions, seminars, tutorials, demonstrations of cases, debates, etc. enliven the teaching programme.

All the departments have clinical laboratories fully equipped to do routine examination work and a number of advanced investigations tests. A regular out-patients department in all the specialities has been started at Panaji and Ribandar hospitals. Besides, the Urban Health Centre at Calapur and Rural Health Centre at Mandur also provide clinical facilities. The students of Preventive and Social Medicine maintain a field journal for the place of visit and also a journal on family care. A population of about 50,000 have been carefully surveyed medically at these centres.

There has been a marked increase in the number of outdoor and indoor patients at Panaji, Ribandar, T. B. and Chest diseases hospital, and Mandur Hospital, which have a total bed strength of 650 beds. On an average, 800 outdoor patients are treated every day and about 1,350 indoor patients are treated per month at these four hospitals. The Urban Health Centres at Calapur and Rural Health Centre at Mandur is medically surveying a population of 8,000 in urban areas and 27,000 in rural areas.

The Family Planning Clinic under the department of Obstetrics and Gynaecology has been recognised under the Central Bureau of Family Planning as one of the centres for post-partum loop insertions. Operations of abortions are also carried out under the medical examination of Pregnancies Act. Till December 1974, 160 vasectomies, 1,257 tubectomies and 192 loop insertions were performed.

A Cancer Detection Centre has been started at this college with joint collaboration of Indian Cancer Society (Goa Branch) with effect from January 1970. All the departments are actively engaged in the Medical Research and the constitution of Goa Medical College Council for the Promotion of Medical Research, aims at co-ordinating various research projects in different clinical and paraclinical Departments and providing research facilities to the members of the Council.

The Medical College with its attached hospitals is functioning in the existing buildings with necessary additions and alterations being made. New buildings for O.P.D., Nurses quarters, Hostel for internees and Housemen and Blood Bank have been constructed in the premises of this College and they are already being used. The construction work of buildings required for the Nursing Students Hostel at Ribandar and the Rural Health Centre at Mandur are under way.

Bambolim Project

The existing premises are insufficient for a full fledged hospital and the college. The Government of India have approved a project under the Fourth plan to construct a college complex at Bambolim with a view to shifting the college there. Bambolim Project is expected to be completed by the end of the Fourth Five-Year Plan. The sanction for the Project was obtained in December 1968 and the total outlay for the project is Rs. 20,414,760·00. For immediate use, a temporary building was constructed at Bambolim in 1969 and the Pre-Clinical departments *viz.* Anatomy, Bio-Chemistry and Physiology have been shifted there. The space thus vacated in Panaji has been utilised for the expansion of the hospital facilities. At Bambolim one student's hostel with a capacity of 72 students has been constructed and occupied by students in June 1969. Type IV quarters have been completed and more students are temporarily accommodated there. One Type VI, 16 Type V and 80 Type IV quarters constructed at Bambolim have been allotted to the Staff. The construction work of 60 Type I and 32 Type III quarters is nearing completion. With the completion of the Bambolim Project, the following facilities will be achieved :—

(1) The college will be located in a newly constructed modern building at Bambolim.

(2) All the teaching and non-teaching staff will be accommodated at Bambolim campus in the residential quarters constructed for the purpose. Besides student's hostel, Nurses quarters will also be constructed.

A full-fledged modern hospital will be constructed at Bambolim with a capacity of 750 beds.

In the Bambolim area, other facilities like elementary school, post office, market, shopping centre etc., will be also provided.

There are Plans to construct a cancer hospital, a new mental hospital, a T.B. sanatorium, an isolation hospital for infectious disease, convalescent home etc. in one large medical enclave.

School Health Programme

For protecting the health of the school-going children the School Health Programme was launched in 1965 with the appointment of two School

Health Officers with headquarters at Panaji and Margao. Recently, two more School Health Officers have been appointed with headquarters at Mapusa and Vasco-da-Gama. The Primary School children are being provided with preventive and curative medical assistance. At other places, the respective Medical Officers in charge of the Primary Health Centres provide these services. During the year 1975-76 the total capacity of water supply in the district was 18.70 m.g.d. and the total water consumed during the same year was 144.34 (lakh) cubic metres.

Health Education

Health Education, the *sine qua non* of all public health programmes, was strengthened in 1965 by the appointment of three Health Educators. The number of such specialists has now gone up to five. One of them is in the Health Education Bureau in the Directorate of Health Services at Panaji and the remaining four are in charge of the Four Zonal Health Education Units with headquarters at Mapusa, Panaji, Margao and Vasco-da-Gama. Besides these, one such specialist for family planning has also been, appointed under the Family Planning Programme. Health Education envisages to increase public understanding and participation. It aims to improve people's health by their own actions and efforts. Its objectives is to help acquire good health practices. A number of printed materials on health like pamphlets, folders, booklets, journals, etc. have been published and distributed so far. Film shows, radio programmes, group discussions, meetings, conferences, training programmes, etc. are also conducted from time to time.

The Public Health Laboratory, the X-Ray Institute and the Vaccine Institute have been upgraded and expanded. The Blood Bank is reorganised. The Health Intelligence Bureau and the Public Health Library have also been set up.

An Epidemiological Cell and a Nutrition Cell have also been added recently. The Medical Store Depot has been reorganised and a Drug Control Section has been started with the appointment of a Drug Controller and three Assistant Drug Controllers.

Family Planning

The population problem has been acute in India and the rise in food production and industrial and other production has been completely set off by the non-commensurate rise in population. It was, therefore, felt necessary to check the growth in population rise and the family planning programme was adopted all over India.

The Family Planning Programme in this district was initiated in 1964. Sterilisation facilities have been introduced in more than ten hospitals and contraceptives are being distributed through a number of centres. The

launching of a Primary Health Centre Scheme with its extension staff has strengthened the family planning work in the rural areas. Since January 1966, a loop-insertion programme was also introduced. During the year 1972, 500 sterilisation operations (Vasectomy) on men and 1,567 (tubectomy) on women and 361 I.U.C.D. insertions were performed.

The organisational set-up of Family Planning Programme in the district has also been modified and one Family Planning Bureau at the headquarters and four Urban Health Centres at Panaji, Mapusa, Margao and Vasco-da-Gama, 13 Rural main Family Planning Centres with 47 sub-centres attached to Primary Health Centres and Sub-Centres at the periphery are functioning.

Besides governmental organisation, voluntary organisation namely the State Social Welfare Advisory Board and All India Women's Conference were carrying out Family Planning work in 13 sub-centres at rural areas and 2 centres at Urban level, respectively. The voluntary organisational Family Planning activities will not continue once Government centres and sub-centres are fully established.

Under the Family Planning Programme the following services are provided free to the public :—

(*a*) Sterilisation operation, tubectomies (Puerpeoral, Gynaecological and vasectomies).

(*b*) I.U.C.D. insertions.

(*c*) Distribution of conventional contraceptives, condom, foam tablets, jellies and diaphragms, etc.

(*d*) Distribution of oral contraceptives.

(*e*) Advice in respect of Rhythm methods—safe period.

(*f*) Treatment for sterility.

(*g*) Recanalisation of the vasectomised persons.

The scheme of Compensation allowance is already in force in this district since September 1967 and the payment is made on the spot to the individuals and motivators. To facilitate the payment as well as to evaluate the work, the system of giving coupons to motivators and doctors has been introduced.

The Family Planning Programme in this district is supported by the Community Development Department through their village workers and their field staff.

Other institutions like Social Welfare Boards, All India Women's Conference and Red Cross are also participating in the programme at various levels.

SANITATION

With the Liberation of the district, due emphasis is given to the supply of treated water to the various centres of the district and also the disposal

of sewage after adequate treatment. The towns of Panaji, Margao, Vasco-da-Gama, Ponda, Sanguem, Valpoi, Sanquelim, Pernem, Bicholim and Mapusa and 26 villages are provided with protected piped water supply. The work is entrusted to the Public Health Engineering wing under the Public Works Department.

After providing piped water supply to important towns and villages, there was a need to provide proper sewage system to the capital of Goa, so as to create satisfactory conditions for public health. This scheme costing Rs. 68·22 lakhs was taken up in the year 1965 and the same was completed and commissioned in 1969. The scheme comprises of a sewage treatment plant installed at Tonca, Panaji. The sewerage scheme is scattered throughout Panaji town and the pumping stations are located at various places at Panaji. The sewerage system for Panaji is divided into eight zones with four pumping stations meant to collect and convey the sewage to the main pumping station near the treatment plant. The effluent from the plant thus collected will be utilised for the purpose of irrigating agricultural lands for which a separate scheme will be prepared. except for a few house connections, the scheme has been entirely completed.

The scheme for construction of Public latrines has been already taken up and a number of public latrines have been newly constructed and are functioning. The underground drainage and sewage schemes is being introduced in the main towns of Goa and the work in this connection in Panaji is already completed and has started functioning. The recent strengthening of the Opa Water Works as also the commissioning of a new plant at Assonora has made itpossible to provide safe water supply to more than one lakh population.

During the period from April 1974 to December 1974, 5,294 students were examined out of which 2,738 students have been found defective.

NUTRITION PROGRAMMES

Applied Nutrition Programme

The Applied Nutrition Programme in the district was to be taken up initially from the year 1966-67 for a period of 5 years in two blocks *viz.* Ponda and Canacona, however, the actual implementation of the programme was started only in the year 1968-69. The programme was subsequently extended in 1971-72 to 3 more blocks *viz.* Satari, Bicholim and Pernem, and in 1974-75 to one more block *viz.* Sanguem.

The entire responsibility of the co-ordination and administration of the programme in this Territory rests on the Department of Community Development, Panchayats and Co-operation under the control of the Development Commissioner. He is assisted in the discharge of his

responsibilities by the Under Secretary of the Department who is ultimately responsible for the day-to-day activities of the programme.

At the taluka level the Block Development Officers of the selected blocks are responsible for providing technical advise and assistance to the village communities associated with this programme and are also responsible for implementing the programme in all its phases. The ultimate responsibility of taking the programme to the village communities rests on the Gram Sevaks and other extension staff of the community development blocks.

In order to assist in the implementation of this programme, a Special Nutrition Officer has been appointed in the Department of Health Services. This Officer is responsible for the supervision of all the Nutritional aspects of the programme, and in particular to nutrition training and education. He is also expected to help the Women's Welfare Officer (Nutrition) on aspects relating to the nutrition of women and children.

In 1973, a training course in Applied Nutrition for the Health Officers in charge of Primary Health Centres, was organised at the Health and Training Centre, Mandur, of the Goa Medical College by the Nutrition Cell. This training centre is now being utilised for the training of health personnel in Applied Nutrition. Similarly, a training course was organised for the Block Development Officers for the first time at the Extension Training Centre, Ela from 19th August to 24th August, 1974. Since the various training institutions are now in a position to impart training for the various categories of personnel, it can be assumed that the training programme under the Applied Nutrition will gain a new momentum.

Special Nutrition Programme

The scheme of Special Nutrition Programme was started in the district on 1st March, 1971, with 350 beneficiaries in two Centres at St. Ines and Fontainhas. Subsequently, four more Centres have been opened at Vasco, Assolna, Uguem and Curchorem. The Institute of Public Assistance implements the Special Nutrition Programme for this Territory.

Details on the expenditure incurred in the district on the programme, since its implementation may be seen from the following statement :—

Item of Expenditure	1970-71	1971-72	1972-73	1973-74
A. Food items :				
(1) Bread	0·78	18·60	49·69	42·56
(2) Sugar and other ingredients..	0·35	2·94	2·03	*Nil.*
B. Honorarium to the Organiser and helper.	0·06	0·80	1·97	1·98
C. Administrative expenses (including miscellaneous items like coolie charges, transport of fuel, etc.).	0·74	4·93	8·32	7·25
Total Expenditure ..	1·93	27·27	62·01	51·79

Mid-Day Meals Scheme

The scheme of mid-day meals is being implemented in this territory since 1964-65, under which a meal is served once in a day to the primary school children. The distribution of meals is made, as far as possible, through the local agencies such as the school committee, or the village Panchayat, with active participation of the school teachers.

This scheme was financed by the Department of Education and implemented through the Community Development Blocks till the year 1968-69. From that year onwards, the scheme was taken over for direct implementation by the Department of Education. The Zonal Educational Inspectors of Panaji, Mapusa, Margao have been made responsible for this programme since 1968-69. The Assistant District Inspectors do the work of supervision and guidance to the Government Primary teachers in all the talukas.

Usually backward areas are selected for the implementation of this scheme. The scheme initially proposed for the Fourth Five-Year Plan envisages a provision of Rs. 15,00,000·00, the yearwise break-up of which is as follows :—

Year	No. of children	Cost of Meals (Amount in Rs.)
1969-70	5,000	1,87,500·00
1970-71	6,500	2,43,750·00
1971-72	8,000	3,00,000·00
1972-73	9,500	3,56,250·00
1973-74	11,000	4,12,500·00
		15,00,000·00

* * *

CHAPTER 17—OTHER SOCIAL SERVICES

LABOUR DEPARTMENT

The welfare of labour is altogether a new aspect absent hitherto upto Liberation of the district. The first steps towards the same were taken when the Government of Goa, Daman and Diu established a Labour Department in the territory for the first time on 23rd June 1963 with the Labour Commissioner as the head of the department. During the year 1973-74, necessary steps were taken to enforce the Payment of Gratuity Act, 1972, and the Contract Labour (Regulation and Abolition) Act, 1970. Similarly, the Goa, Daman and Diu Shops and Establishments Act, 1973 and the Minimum Wages Act, 1948 have been made applicable in the territory. Besides these Acts, the welfare of labourers is to be taken under the Industrial Disputes Act, 1947 ; the Indian Trade Unions Act, 1926 ; the Factories Act, 1948 ; the Employees' Provident Fund Act, 1952 ; the Industrial Employment (Standing Orders) Act, 1946 ; the Payment of Wages Act, 1936 ; the Workmen's Compensation Act, 1923 ; the Working Journalists (Conditions of Service) and Miscellaneous Provisions Act, 1965 ; the Employment Exchange (Compulsory Notification of Vacancies) Act, 1959 ; the Motor Transport Workers Act, 1961 ; the Apprentices Act, 1961 ; the Maternity Benefit Act, 1961 ; the Employment of Children Act, 1960 ; the Weekly Holidays Act, 1942 ; the Indian Boilers Act, 1923, the Payment of Bonus Act, 1965, etc.

Organisation

At present the Labour Department is headed by the Commissioner of Labour and Employment who is also a Conciliation Officer under the Industrial Disputes Act, 1947 ; the Registrar of Trade Unions under the Indian Trade Unions Act, 1926 ; the Commissioner for Workmen's Compensation under the Workmen's Compensation Act, 1926 ; the Certifying Officer under the Industrial Employment (Standing Orders) Act, 1947 and the Chief Inspector under the Motor Transport Workers Act, 1961. The Commissioner, is assisted by an Assistant Labour Commissioner, Senior Inspector of Factories and Boilers and Labour Inspectors. The State Labour Advisory Committee, the State Evaluation and Implementation Committee and the Arbitration Promotion Board has been set up with a view to formulating policies in respect of industrial relations and to advise Government on labour matters.

State Advisory Committee

The State Labour Advisory Committee[1] consists of the representatives of the Government, Members of Parliament, Members of Legislative Assembly and representatives of Employers' and Workers' Organisations. This Committee is consulted regarding formulation of labour policy, enactment and amendment of Labour Laws, framing of rules, etc. The State Labour Advisory Committee also serves as a forum for watching the effective implementation of the Labour Laws.

State Evaluation Committee

A State Evaluation Implementation Committee,[2] consisting of representatives of the Government and Employers' and Workers' organisations, reviews all cases of breach of code of discipline both by the employers and the workers and takes suitable action thereon. An Arbitration Promotion Board has also been set up in May 1972 with a view to settling disputes. It consists of the representatives of the Government, Workers and Employers.

Labour Welfare Centre

With a view to providing welfare facilities to the working class people, two Labour Welfare Centres were set up at Bicholim and Margao, in December 1968, and in July 1972 respectively. Facilities for indoor and outdoor games, reading and sewing are provided at these centres. In the year 1974-75, three more such Centres have been set-up at Ponda, Curchorem and Vasco-da-Gama. It has also been proposed to open two more such Centres at Mapusa and Panaji.

Achievements

During the year 1973, 180 disputes were handled and 42 cases were settled in conciliation ; 30 cases were referred to the Industrial Tribunal by the Administration for adjudication. In 2 cases parties agreed to refer the matters in dispute to the arbitration of the Labour Commissioner under the Code of Discipline in Industry and the remaining cases were either informally settled or withdrawn or dropped after holding discussions by the parties with the Labour Commissioner.

Under the Factories Act, 1948, till the end of the year 1973, there were 155 registered factories out of which 113 factories were under working conditions employing approximately 6,910 workers. With a view to extending the benefits provided under the Act to the workmen employed in the factories, regular inspections are being carried out. Under the Motor Transport Workers Act, 1961, 68 Motor Transport undertakings employing about 808 workmen were registered. These establishments

[1]Constituted *vide* Notification No. LID/129/70, dated 20th February 1970.
[2]Constituted *vide* Notification No. LID/130/70, dated 20th February 1970.

are inspected frequently with a view to enforce the various provisions under the Act. Inspections are also carried out under the Payment of Wages Act, 1936, the Payment of Bonus Act, 1965, and other Labour Laws. The department has also dealt with several complaints received from the Unions and workmen.

By the end of December 1969, 25 prosecutions were launched under the Factories Act, 1948, 28 of which ended in conviction. During the year 1971, 22 cases were filed under the Motor Transport Workers Act, 1961, of which 10 cases ended in conviction, 4 in acquittal and 8 were pending. The amount realised by way of fine during this period was to the tune of Rs. 600.00.

Under the Workmen's Compensation Act, 1923, 67 fatal accidents and 33 non-fatal accidents were handled by the Department during the year 1973. During the same year, 19 fatal cases and 7 non-fatal cases were disposed off, and an amount of Rs. 1,43,404.00 was distributed among the dependents of the deceased workmen. However, at present 48 fatal and 26 non-fatal cases are pending respectively.

Under the Indian Trade Unions Act, 1926, 70 Registered Trade Unions were functioning bv the end of 1975 in various industries in the district.

PROHIBITION

So far there is no temperance movement in the district. Similarly, there is no prohibition in the district, but a ' dry day ' is observed on the first day of each month in view of the Government policy to restrict the habit of drinking at least on pay day.

DIRECTORATE OF SOCIAL WELFARE

Introduction

As per the Census 1971 the population of the Scheduled Castes and Scheduled Tribes in the district was placed at 14,193 and 439, respectively, that 1.78 per cent and 0.06 per cent respectively of the total population of the district. The following communities *viz.* Bhangi, Chambar, Mahar, Mahyavanchi and Mang have been declared[1] as belonging to the Scheduled Castes and the following communities *viz.* Dhodia, Dubla, Nayaka, Siddi and Varli as belonging to the Scheduled Tribes. With such population belonging to the backward classes, the Directorate of Social Welfare was established in 1969 to look after their welfare.

Organisation

With the creation of an independent Directorate since January 1976, the department is headed by the Director of Social Welfare with its headquarters at Panaji. He is assisted in his work by a Superintendent-*cum*-

[1] *Vide* Government of India Notification No. DF-1-SCT-64, dated 19th February 1968.

Probation Officer, Social Welfare Officer and other technical and ministerial staff. At the taluka level, the work is looked after by the Block Development Officers.

Functions

The principal function entrusted to the department is the amelioration of backward classes by providing them financial assistance and other facilities with a view to bringing them on par with the other so called advanced communities.

Contribution

In order to improve the socio-economic conditions of the shceduled castes/scheduled tribes population quite a number of schemes were notified and implemented under housing, education and economic development programme during the Fourth Five-Year Plan period.

Under the Housing Programme, financial assistance to scheduled castes and scheduled tribes population is granted for their housing schemes. Under these schemes, the financial assistance is granted to an individual belonging to the backward classes at the rate of Rs. 2,500.00 which is given in four equal instalments. 75 per cent of the assistance is given as subsidy and the remaining 25 per cent as loan repayable in 20 yearly equal instalments without interest. The beneficiary should hold a clear title to the land and the proposed house should have a minimum floor area of 220 square feet. Upto the end of the year 1975-76, the expenditure incurred under this scheme was of Rs. 11.40 lakhs benefitting 1,205 applicants. Financial assistance is also rendered to the backward class population for the purchase of house sites at the rate of Rs. 200.00 on condition that the site should not measure less than 150 square feet. 51 applicants have availed of the assistance under this scheme upto 1975-76.

Besides giving financial assistance for housing, it is also provided for economic pursuits with a view to improving their economic conditions. Under the scheme of the financial assistance for purchase of wheel-barrows and other protective devices to the scavengers for improving their living and working conditions, assistance is granted to the municipalities to the extent of 75 per cent of the cost of the material as grant-in-aid with a view to avoiding the direct contact of the scavengers with night soil.

Under the scheme of financial assistance to a member of a backward class society in the area of operation of a dairy co-operative society for the purchase of milk cattle is granted an assistance of Rs. 1,000.00 of which subsidy amount to Rs. 660.00 and loan to Rs. 340.00. Upto the end of the year 1975-76, 151 persons have been benefitted under this scheme and the expenditure incurred was of Rs. 1.38 lakhs.

Another scheme envisages grant of finanial assistance to the members of the backward class society for the purchase of pump sets and other water lifts for agricultural purposes. A maximum amount of Rs. 3,000 is permissible to an individual out of which an amount of Rs. 1,980 is treated as subsidy and the remaining amount of Rs. 1,020 is treated as loan.

Under the Economic Development Programme good response was received in case of the following schemes :—

(1) Financial assistance to set up cottage industries.

(2) Financial assistance for purchase of milch animals.

(3) Financial assistance for purchase of work animals.

Upto the end of 1975-76, 1,307 members belonging to scheduled castes/scheduled tribes received financial assistance of which 797 persons received assistance for setting up cottage industries, 359 persons for work animals and 151 for milch animals.

Besides the financial assistance and other economic measures as described above, other measures are also taken for the uplift of the backward classes. Certain percentage of posts in the Government service in the Centre as well as State are reserved for the candidates belonging to the scheduled castes/scheduled tribes. The Government have launched a scheme of grant of land to the families belonging to the scheduled castes and scheduled tribes on priority basis. The extent of land to be leased to an individual should be so much as to make the land in the possession whether as tenant or owner, equal to 2½ acres of paddy land or land under coconut, arecanut or sugarcane or 5 acres of land under any other crops.

Similarly in the field of education there was also a marked improvement in the total school enrolment of scheduled castes and scheduled tribes.

The enrolment of children belonging to scheduled castes and scheduled tribes in the year 1976-77 was 3,608 as against 2,850 children enrolled in the year 1968-69. Other benefits for the children belonging to scheduled castes/scheduled tribes are provided by means of freeships, stipends, merit scholarships to girls and post-matric scholarships, under ' Backward Classes '.

Upto now, the classification of the backward classes has been limited only to the scheduled castes and scheduled tribes population. However, it has been decided to have additional classification of backward classes who neither belong to scheduled castes/scheduled tribes but who socially, economically are as backward as those belonging to the scheduled castes/ scheduled tribes population.

So far the department was looking only after the backward class welfare, but from the Fifth Five Year Plan onwards, it has been decided

to look after not only the welfare of backward classes but also social welfare programme in general, such as women welfare, child welfare, welfare of the physically handicapped along with the nutrition programme, etc.

STATE SOCIAL WELFARE ADVISORY BOARD

The State Social Welfare Advisory Board was set up in April, 1963 for the implementation of the programme of the Central Social Welfare Board in the district. The State Board has also been entrusted with the Central Board's programmes in the Union Territory of Dadra and Nagar Haveli.

The State Board as per its constitution has a non-official lady social worker nominated as Chairman by joint consultation between the Government of Goa, Daman and Diu and the Central Social Welfare Board. The Board is composed of non-official social workers and official members of the concerned departments. The members of the Board are nominated by the Central Social Welfare Board and the Government of Goa, Daman and Diu in consultation with each other.

The Board started functioning during the year 1963-64 and immediately launched its programme of grant-in-aid to voluntary institutions for various purposes for the welfare of children and women and the handicapped. The Board also launched the Welfare Extension Project scheme of co-ordinated pattern in all the Community Development Blocks in the territory. The Board's programme are based upon the principle of recognising the existence of voluntary effort in the field of social welfare particularly for the vulnerable groups, children, women and the handicapped. The grant-in-aid to voluntary institutions is already in existence. The Welfare Extension Projects in the rural areas were conducted through the specially set up voluntary bodies called Project Implementing Committees. These Committees were set up with non-official and official members at the Block level. Invariably lady social workers were appointed as the Chairman of these Committees.

The Board also launched a Socio-Economic Programme in 1963-64 for the purpose of providing remunerative work to needy women. This scheme was entrusted to a voluntary institution which started the work of procurement and sales of craft and embroidered articles. However, since 1963, the scheme has ceased to function.

The Board gives financial assistance to registered voluntary institutions and recognised educational institutions for conducting two year Condensed Course of Education for Adult Women who have had no opportunity to complete their education. This course helps them to complete S.S.C./P.S.C. Examination which are the minimum qualifications for employment and training for the various services.

The Board gives financial assistance to institutions for conducting Holiday Homes for children of lower income groups between the age groups of 10 to 16 during the vacations. The entire cost of such Holiday Homes is borne by the Board.

From 1969-70, the Central Social Welfare Board launched a scheme of Family and Child Welfare Project. This scheme was started by gradually converting the old Welfare Extension Projects. By the end of March 1971, almost all the Blocks in the district except the Mormugao taluka, were converted into the new scheme. Under this scheme *Balwadis* are run for children upto the age of 6 and *Balmandals* for the children between 6 and 12. Residential camps accommodating 15 women are conducted for 15 days in each block where the women are given elementary training in the important subjects such as health, hygiene, child care, environmental sanitation, crafts, social education, general knowledge, family budgetting, family welfare planning, etc. This scheme is being implemented with the co-operation of the UNICEF which is assisting by giving equipments, vehicles and by meeting the expenditure on training of the field workers and supervisors. By the end of March 1973, 80 workers have been provided training for the new scheme in this State Board. So far 10 Mukhya Sevikas and 64 Balsevikas/Griha Sevikas have been trained. The UNICEF has also supplied one car and a number of ladies bicycles for this scheme.

From 1971-72, the Central Social Welfare Board has been entrusted by the Government of India with the work of providing special nutrition to the children in the Balwadis, between the age group of 3 to 5 and the daily feeding has to include 300 calories and 15 gms. proteins.

The following statement shows the progress of the schemes undertaken by the Board since its inception.

Name of the Scheme	Total amount allotted since inception upto March 1973	Total No. of beneficiaries from inception upto March 1973
	Rs.	
Grant-in-aid to voluntary institutions ..	3,66,400	87,138
Condensed Course of education for adult women between the age group of 18 to 30.	1,41,425	450
Holiday Homes	57,977	1,000
Rural Welfare Programmes	49,25,510	2,04,992

INSTITUTE OF PUBLIC ASSISTANCE

Historical Background

The Institute of Public Assistance or 'Provedoria da Assistencia Publica' was established on 7th August 1947 as a section of the Directorate

of Civil Administration and its Chief aim was to co-ordinate and exercise supervision over all the modalities of Social Welfare, either maintained or subsidised by the Government or other administrative bodies and corporations. In the beginning the mission of 'Provedoria' was only to administer the Public Assistance Fund, but only after three months of its inception, Provedoria began to enjoy all the privileges and facilities given to Government bodies. After four years i.e. in 1951, the progress made by the 'Provedoria' was so great that the Overseas Ministry stated that there was need of re-organising the whole set-up of 'Provedoria' so that, financial and administrative autonomy might be given to it.

Though 'Provedoria' was enjoying all the privileges of an autonomous body, it was declared as an autonomous body of the Government from April 14, 1960 and since then it started functioning as a separate department of the Government.

Functions

The main functions of the 'Provedoria' as clearly stated in the Legislative Diploma No. 1944, dated the 22nd October 1959 by which the system of rendering social assistance in the state was reorganised as under:—

The objective of the 'Provedoria' is to co-ordinate and supervise all the institutions of Social Welfare either maintained by the Government or by any other private body. In respect of sanitary assistance the 'Provedoria' has to collaborate with the Health Department. 'Provedoria' helps the institutions of social welfare through the grant of subsidies, by bestowal of any property either moveable or immoveable that belongs to the 'Provedoria' and by giving employment to the unemployed.

The administration of the 'Provedoria' during the Portuguese regime was controlled by the 'Provedor' and the Council of 'Provedoria. The Governor General used to direct the general policies of the 'Provedoria.' The Council of 'Provedoria' functioned under the 'Provedor' and was composed of—

(*a*) one member of Revenue Department,

(*b*) 'Provedor' of 'Santa Casa de Misericordia de Goa',

(*c*) President of the 'Hospicio' of Margao,

(*d*) President of the 'Asilo' of Mapusa,

(*e*) one representative from the talukas of Tiswadi, Ponda and Sanguem,

(*f*) one representative from the talukas of Bardez, Pernem, Bicholim and Satari,

(*g*) one representative from the talukas of Salcete, Quepem and Canacona,

(*h*) one representative from Daman,

(*i*) one representative from Diu.

The 'Provedor' had the voting right in case the voting was to be equal. The 'Provedor' had the authority to represent the Public Assistance department and to exercise disciplinary action over its staff. The Council of 'Provedoria' approved budgets and verified the accounts of 'Provedoria.' All the deliberations of the Council of 'Provedoria' were put into effect only after they were accorded sanction by the Governor General.

At present the Institute of Public Administration though an autonomous body functions under the over-all financial and administrative control of the Government. The Institute is headed by the Director who is assisted in his work by one Superintendent *cum* Accountant, one Treasurer and other necessary ministerial and non-ministerial staff such as clerks, nurses, matrons, cooks, etc.

The total strength of the Institute during the year 1974-75 was 144. 'Provedoria' planned, constructed and installed the Hospital Abade Faria (Mental Hospital) of Altinho, and the T. B. hospital of Santa Ines, both presently administered by the Health Department. Upto the year 1964, 'Provedoria' fully subsidised the maintenance of hospitals of 'Santa Casa' at Ribandar, 'Hospicio' at Margao and 'Asilo' at Mapusa.

Contribution

During 1972-73, the Institute provided social assistance to the needy through the following schemes :—

(1) *Orphanages.*—Four orphanages (one at Panaji and one each at Goa-Velha, Cuncolim and Mapusa) are being maintained by the Institute. In all there were 166 children in these 4 orphanages. An amount of Rs. 1,80,537.45 destined for their maintenance including education, craft training, food, clothing was spent by 'Provedoria' during the financial year 1972-73.

(2) *Homes for the Old and Indigent.*—The Institute maintains 5 homes for the old, indigent and infirm in Chimbel, Candolim, Majorda, Loutulim and Panaji. There were in all 266 inmates in these 5 homes which were provided with food, clothing, medical care, entertainment. etc. An amount of Rs. 2,19,769.42 was spent by this 'Provedoria' for this purpose during the financial year 1972-73.

In view of the extension of the Goa, Daman and Diu Prevention of Begging Act, 1972, to this district, the homes at Ribandar, Candolim and Loutulim shall function as certified Institutions.

(3) *Mahilashrams.*—The Institute maintains three Mahilashrams, one at Candolim, meant to house deviated girls/women sentenced by District Magistrates, Police, etc. under the S.I.T. Act. Eight inmates of this Institution along with 29 day time village students belonging to backward classes are trained to manufacture fancy articles of sisal and banana fibre. The other two Mahilashrams located at Merces and Panaji are meant to shelter 40 unmarried pregnant mothers and are given moral training for their rehabilitation as well as trained in stitching, embroidery, etc. The expenditure incurred with these Mahilashrams during 1972-73 was Rs. 44,347·81.

(4) *Creches.*—Three creches (at Panaji, Merces and Caranzalem) for babies of unmarried mothers and of poor working parents are maintained. 75 babies were looked after in these creches in the year 1972-73 at the total cost of Rs. 20,078.94.

(5) *Assistance to poor families without earning members.*—Financial assistance ranging from Rs, 20.00 to Rs. 40.00 per month was granted to 400 poor families during 1972-73. Also 85 indigents of 'Ex-Santa Casa' were granted during this financial year subsidies ranging from Rs. 4·00 to Rs. 15·00 per month. Fifty one persons without earning members were sanctioned lump-sum subsidies once only for the rehabilitation of their families for starting of home industry like poultry, piggery, making of *papads*, pickles, sowing, and selling of vegetables, flowers, etc. The expenditure incurred for this purpose during 1972-73 is Rs. 1,33,254·40.

(6) *Assistance to poor students.*—Under this scheme poor students are given assistance both in cash and in kind (books, clothes, etc.), 109 poor students were benefitted during the financial year 1972-73, and the expenditure incurred for this purpose was Rs. 2,161.99.

(7) *Doles for beggars.*—During the financial year 1972-73, around 2,000 beggars were paid monthly dole of Rs. 14.00. Also innumerable beggars are provided with mid-day meals at Panaji, at the Institution 'Sopa aos Pobres'. The expenditure incurred for this purpose during the financial year 1972-73 was Rs. 3,27,066.27.

(8) *Immediate relief to Victims of fire, flood and other natural calamities.*—Financial assistance ranging from Rs. 50.00 to Rs. 250.00 per victim of natural calamity is given under this scheme. During the financial year 1972-73, 360 victims benefitted from this scheme. The expenditure incurred for this purpose during this year was Rs. 22,790.00

(9) *Rehabilitation of cripples and assistance to extraordinary cases of illness.*—Under this scheme crippled persons are provided with artificial limbs at the Artificial Limb centre, Pune, and the cost of prosthesis and hospitalisation charges are borne by the ' Provedoria.'

Also persons suffering from incurable diseases like cancer are given subsidies to proceed for treatment in the neighbouring States, whenever such facilities are not available in Goa. During the financial year 1972-73, two persons were provided with artificial limbs and five persons received assistance by way of cash. The expenditure incurred during the financial year 1972-73 for this purpose is Rs. 1,758·62.

(10) *Mother and Child Welfare Centre.*—The Institute maintains nine Mother and Child Welfare Centres chiefly in remote areas, where normal and prompt medical assistance is not available. Each centre has a nurse-*cum*-midwife. She visits poor homes in surrounding areas and treats pregnant women and babies free of cost. During the course of the financial year 1972-73, the midwives rendered assistance to 530 pregnant mothers, 404 nursing mothers, 1,909 children and attended to 226 deliveries. The expenditure incurred with this scheme during the financial year 1972-73 was Rs. 53,454·39.

(11) *Grant of Stipends/Half freeships to poor students of High Schools and colleges.*—In commemoration of the Gandhi Centenary Year, this new scheme was launched by the Institute. Wherever there are no hostel facilities, the poor students who have to spend on transport or have to walk long distances (exceeding 3 kms.) are given a stipend Rs. 100·00 and Rs. 200·00 respectively. During the financial year year 1972-73, 300 high school and 100 college students were given stipends amounting to Rs. 50,000·00.

(12) *Nutrition Schemes Programme.*—Under this programme, sponsored by the Central Government, ' Provedoria ' maintained 6 centres in Goa located at Fontainhas, St. Ines, Assolna, Uguem, Curchorem and Vadem. A loaf of 100 gms. and a cup of milk was daily distributed to poor children upto the age of 6. Under this scheme, 2,012 children and 22 nursing and expectant mothers benefitted. The expenditure incurred for this purpose during the financial year 1972-73 was Rs. 72,507·88.

(13) *Balwadis.*—' Provedoria ' has opened in the year 1973, 22 *balwadis* in remote villages of Goa for the benefit of the children of these villages. Around 900 children are attending these *balwadis* where they are provided with nutritious food and imparted education through K. G. methods. An amount of Rs. 1,00,000·00 is expected to be spent with this scheme per year.

(14) *School for the blind.*—A residential school has been proposed by the ' Provedoria ' with a view to impart education to the blind children in the district. The blind children will be taught in Braille script and thereafter trained according to their abilities to lead a decent independent life in future.

Financial Resources

All the expenditure on the above schemes is met from the following main sources :—

(1) Income from Institute's own sources (interest on loans and fixed deposits, income from the agricultural properties donated to the Institute, etc.)

(2) Lotteries.

(3) Government Grant-in-aid.

(4) Additional tax on 20 per cent on fines.

(5) Other sources of income.

(6) Stamps of Assistance.

The following statement gives the income derived by the Institute from the sources mentioned above during the year 1972-73 :—

	Rs.
(1) Income from Institute's own sources ..	2,63,156·00
(2) Lotteries	29,24,250·00
(3) Government Grant-in-aid ..	41,000·00
(4) Additional tax of 20 per cent on fines ..	839·00
(5) Other sources of income	3,518·00
(6) Stamps of Assistance	10·00
Total ..	32,32,773·00

* * *

CHAPTER 18—PUBLIC LIFE AND VOLUNTARY SOCIAL SERVICE ORGANISATIONS

PUBLIC LIFE

In this chapter an attempt is made to give the picture of Public life and Voluntary Social Service Organisations in the district. The first section namely Public Life, gives an idea regarding potential awakening and moulding of public opinion, political parties and organisations and newspapers and periodicals.

The Portuguese colonial domination for a period of 450 years naturally influenced and greatly affected the course of political, social, economic and religious life in the district. However, in spite of all the attempts by the erstwhile rulers to obliterate the Indian character of the people, the district remained politically, economically and culturally one with the rest of the country. Moreover, in the absence of freedom of speech and the press, political awakening among the people was ruthlessly suppressed. Thus, the people were confronted by the difficult task of throwing off the legacy of Portuguese oppressive rule, which was finally brought to a glorious end by Operation Vijaya on December 19, 1961.

In the wake of Liberation, the district witnessed a political awakening among the people, while the role of the Press underwent a significant change. The Press played an effective role in moulding public opinion and enriching public life.

With the establishment of democratic institutions, the people were provided for the first time in their long and chequered history, with an opportunity for direct participation in Government, making them masters of their destiny. This was manifested by holding general elections, which incidentally were the first ever to be held in the history of this district, when the people elected their representatives both to the Lok Sabha and the State Legislature Assembly.

The district has a uni-cameral Legislature. The district is at present divided into two constituencies for representation in the Parliament, i.e. Panaji and Mormugao, and into 28 constituencies for representation in the State Legislative Assembly. The Assembly constituencies in the district are given below :—

1. Pernem	4. Calangute
2. Mandrem	5. Mapusa
3. Siolim	6. Tivim

7. Bicholim
8. Pale
9. Satari
10. Panaji
11. St. Cruz
12. Cumbarjua
13. Santo Andre
14. Marcaim
15. Ponda
16. Siroda
17. Sanguem
18. Rivona
19. Canacona
20. Quepem
21. Cuncolim
22. Benaulim
23. Navelim
24. Margao
25. Curtorim
26. Cortalim
27. Dabolim
28. Mormugao

Since the Liberation of the Territory on December 19, 1961, four Parliamentary elections and four state Assembly elections were held on the basis of adult franchise. An Opinion Poll was also held for the first time in the district on January 16, 1967 with a view to ascertaining the wishes of the people i.e. whether the district should merge with the State of Maharashtra or remain as an Union Territory. The electorate declared its verdict in favour of remaining an Union Territory. Parliamentary elections were held in the district in 1963, 1967, 1971 and 1977 respectively. In the first Parliamentary election held in 1963, both the Panaji and Mormugao constituencies were represented by the Maharashtrawadi Gomantak Party. In the 1967 Parliamentary election the Maharashtrawadi Gomantak Party and the United Goans Party represented the Panaji and the Mormugao constituencies respectively. In the 1971 Parliamentary election the Indian National Congress (R) Party and the United Goans Party represented the Panaji and the Mormugao constituencies, whereas in the 1977 Parliamentary election the Panaji constituency was represented by the Maharashtrawadi Gomantak Party and the Mormugao constituency was represented by the Indian National Congress Party.

The following statement indicates the details of the 1971 and 1977 Parliamentary elections in the Territory:

Constituency	Electorate		No. of votes polled						Percentage of votes polled	
			Valid		Invalid		Total			
	1971	1977	1971	1977	1971	1977	1971	1977	1971	1977
1	2	3	4	5	6	7	8	9	10	11
Panaji	2,08,855	2,43,439	1,19,432	1,51,126	3,683	3,718	1,23,115	1,54,844	58·91	63·60
Mormugao	2,26,313	2,33,965	1.16,473	1,41,920	3,753	3,022	1,20,226	1,44,942	53·12	61·52

Similarly four general elections were held in the district in 1963, 1967, 1972 and 1977 to elect their representatives for the State Legislative Assembly. In the first general election for the State Assembly held on December 9, 1963, the district had 28 seats out of which 14 seats were secured by the Maharashtrawadi Gomantak Party, 12 seats by the United

Goans Party and 2 seats by the Praja Socialist Party. The parties contesting were Maharashtrawadi Gomantak, United Goans, Indian National Congress, Praja Socialist and Frente Popular. Besides, a number of Independents also contested the election.

In the case of the Assembly elections of 1967, out of 3,92,951 total electorate, 2,68,984 exercised their franchise, the percentage of votes polled being 68·45. The Maharashtrawadi Gomantak Party secured 16 seats and the United Goans Party claimed 12 seats. Besides Independents, the political parties that contested the election were the Maharashtrawadi Gomantak, the Praja Socialist, the United Goans (Sequeira Group) and the United Goans (Furtado Group). During the 1972 General elections for the State Assembly, out of 28 seats in the district, the Maharashtrawadi Gomantak Party bagged 18 seats whereas the remaining 10 seats were secured by the United Goans Party. Out of 4,21,379 total electorate, 2,86,584 exercised the voting right, the percentage of votes being 68·01. The Maharashtrawadi Gomantak, the United Goans, the Indian National Congress (R), the New Maharashtrawadi Gomantak the Bharatiya Jana Sangh, the Communist Party of India, the Communist Party of India (Marxist), the Socialist Party and the Independents were the main parties contesting the elections.

The district went for the fourth time to the polls on June 1, 1977 to elect 28 representatives for the fourth Legislative Assembly with added electorate and fresh delimitation of the constituencies since elections in 1972. The strength of the total electorate in the district has shown an increase from 4,21,379 in 1972 elections to 4,50,291 in the 1977 elections.

The fresh delimitation of the constituencies resulted in the elimination of Curchorem and Aldona constituencies while two new constituencies *viz*. Dabolim and Rivona have been created. In addition, St Estevam constituency has been renamed as Cumbarjua as a result of the reshuffling of the areas.

The district now has one constituency exclusively reserved for the scheduled castes and that is Pernem.

The main parties contesting the 1977 Assembly elections were the Maharashtrawadi Gomantak, the Indian National Congress, the Janata, the Communist Party of India and the Independents.

Out of the total electorate of 4,50,291 in the district, 2,72,338 votes were polled representing a percentage of 60·48. The total number of votes rejected were 4,228.

The Maharashtrawadi Gomantak party bagged 15 seats whereas the Indian National Congress Party (R) secured 10 seats, and the Janata Party 3. Daman seat went to the candidate supported by the Maharashtrawadi Gomantak Party and the Diu seat to an Independent. The

Maharashtrawadi Gomantak Party came into power for the third time. The district also witnessed four bye-elections in 1964, 1968, 1971 and 1974. The phenomenal success of these elections characterised by smooth progress of voting is a proof of the spirit of the masses to adjust themselves to a democratic way of life.

LEGISLATURE DEPARTMENT

Organisation

The passing of the Government of Union Territories Act, 1963, by the House of People brought into existence a popular ministry and a legislature in the Union Territory of Goa, Daman and Diu. The first popular ministry after the liberation of the territory from the Portuguese was formed on 20th December 1963 following the first general elections in the territory held on December 9, 1963. This necessitated a creation of a separate Legislature Department to cater to the needs of the Legislative Assembly. The work was then assigned to the Law Secretary. The department comes under the control of the Honourable Speaker of the Legislative Assembly.

Functions

The main functions of the Legislature Department are looking into legislative matters, reporting, editing and printing of debates, looking into matters relating to the committees of the House, looking after the pay and allowarces of the members of the Legislative Assembly and providing reference and information service to the members of the Legislative Assembly.

For Administrative convenience the Legislature Department is divided into four branches *viz.* A, B, C and D and different subjects have been allotted to different branches of the Legislature Department.

Contribution

The Legislative Assembly of Goa, Daman and Diu met during the following periods and passed 12 bills in 1964, 20 in 1965 and 9 in 1966 :—

		Commenced on		Prorogued on
1964	..	9th January 1964	to	15th January 1964.
		5th March 1964	to	6th April 1964.
		15th July 1964	to	12th November 1964.
1965	..	18th January 1965	to	26th March 1965.
		26th July 1965	to	12th August 1965.
		8th November 1965	to	12th November 1965.
1966	..	26th February 1966	to	1st April 1966.
		18th July 1966	to	5th August 1966.

The Second Legislative Assembly of Goa, Daman and Diu met during the following periods and passed 12 Bills in 1967, 10 in 1968, 15 in 1969 and 10 in 1970:—

1967	12th April 1967 to 18th April 1967.
	17th July 1967 to 8th August 1967.
	11th December 1967 to 29th December 1967.
1968	1st March 1968 to 5th April 1968.
	22nd July 1968 to 21st September 1968.
1969	21st February 1969 to 28th March 1969.
	17th September 1969 to 13th October 1969.
1970	27th February 1970 to 15th April 1970.

The Third Legislative Assembly of Goa, Daman and Diu met during the following periods and passed 15 Bills in 1971, 13 in 1972, 12 in 1973, 19 in 1974 and 16 in 1975 :—

1971	11th February 1971 to 17th February 1971·
	19th March 1971 to 23rd April 1971.
	20th September 1971 to 28th September 1971.
1972	24th March 1972 to 30th March 1972.
	3rd July 1972 to 28th July 1972.
	21st November 1972 to 30th November 1972.
1973	23rd February 1973 to 12th April 1973.
	24th September 1973 to 5th October 1973.
1974	1st March 1974 to 25th April 1974.
	25th September 1974 to 9th October 1974.
1975	14th March 1975 to 29th April 1975.
	3rd October 1975 to 6th October 1975.

The Legislature Department prepared brief reports of the business transacted during each session of the House and undertook the preparation of Who's Who of the members of the Legislative Assembly of Goa, Daman and Diu.

The following statement gives the number of Reports presented to the House by various Committees of the House since the inception of the Legislative Assembly of Goa, Daman and Diu till December 1975 :—

Name of the Committee	No. of Reports
Public Accounts Committee	18
Estimates Committee	11
Committee on Delegated Legislation	7
Committee on Government Assurance	20
Committee on Privileges	2
Rules Committee	2

NEWSPAPERS AND PERIODICALS

During the erstwhile Portuguese regime, even though the art of printing was introduced as early as in 1557 and the Government Printing Press was established in 1821, little attention was paid to influence the course of public life and keep awake the interest of the common man in the district.

However, the first weekly official paper known as 'Gazeta de Goa' was published by the Government Printing Press in 1821. Subsequently many newspapers and periodicals were published in the district covering three distinct periods, the first being from 1821 to 1859, the second from 1859 to 1895 and the third from 1897 to 1922. A list of the newspapers and periodicals published from 1821 to 1935 is given in the Appendix 25.

The Press, soon after the Liberation of the territory in the year 1961, underwent a significant change and played an effective role in educating public opinion and enriching public life in the district. The enthusiasm of the people to enjoy the new found freedom was reflected in the sudden spurt in the number of newspapers and periodicals published in the district. In fact, the role of the Press is of such a paramount importance from the point of view of society, that it has rightly been called the 'Fourth Estate'.

As compared to 10 newspapers/journals including 7 Portuguese, 2 Konkani and 1 Marathi, which were being published regularly in the pre-Liberation days, the number shot up to 30 in 1974. However, some of them could not obviously sustain the effervescence and the number declined to 19 which are now in circulation. They include 6 dailies, 3 in Marathi and one each in English, Portuguese and Konkani. Besides dailies, a number of weeklies, monthlies and other periodicals are also published in English, Marathi and Konkani. The total circulation of all the newspapers and periodicals comes to about 60,000 copies which means that one newspaper/periodical is available for 14 persons. Taking the country as a whole, about 22 persons depend upon one copy of a newspaper/periodical. Four news agencies feed these journals. Information regarding activities in different spheres is also disseminated in the form of booklets, brochures, leaflets, folders, posters and advertisements.

Of the leading publications in the district, the *Navhind Times*, the *Navprabha*, the *Gomantak* and the *Rashtramat* are the most predominant. While the first one is published in English, the remaining three are published in Marathi. These dailies have wide circulation not only in the district, but also in the neighbouring areas of Karwar, Sawantwadi, Vengurla, etc. of the States of Maharashtra and Karnataka. There are other well-known English, Konkani and Portuguese dailies as well. *O Heraldo* is the only Portuguese daily which has continued its publication

since 1900. There is also an English section in it. The other Konkani daily is *Uzvadd.*

VOLUNTARY SOCIAL SERVICE ORGANISATIONS

Prior to Liberation, there were very few voluntary social service organisations in the district. They were catering to the needs of only a small section of the society, but soon after, with the advent of Liberation in 1961, one witnessed a tremendous spurt in the development of these organisations in the district.

In the past, the socio-economic-political concepts were not developed and the State and the Individual stood far apart, the State performing the duties of a legal functionary leaving the individual to seek his own moral and intellectual uplift.

However, with the advance of time and development of culture and civilisation, human life has become more complex, and interdependence of the individual with the social structure has considerably increased. It is in this field that voluntary social service organisations play a dominant role in the development of community life, and help to strengthen the social solidarity of the State. They contribute to a great extent in educational, social, literary, philosophical and other activities pertaining to the moral and material development of human personality.

Since, in a welfare state, the Government have to perform manifold functions, it cannot cover all the sectors and all the sections of the society. It is, therefore, essential to have social organisations of the people with common interest, which offer easy and wider scope for an individual to develop. The nature of these voluntary organisations is complementary and these institutions work hand in hand with the Government. They are helpful and co-operative, and not competitive with the state in the field. It would be interesting to note that the voluntary efforts of such institutions succeed where the mighty efforts of the Government fail to elicit any public response.

Besides, the voluntary social organisations, can grasp much better the needs of the people in the area and offer proper solutions to their problems. However, these voluntary social organisations, though helped by the Government, complain very often of inadequate finances. Many times, they have to rely upon their own funds accruing mainly from donations from the public. If substantial assistance in the form of grants and subsidies is given to these social institutions, they would certainly look forward to a bright future.

During the last decade, many voluntary social service institutions have sprung up in the district. These institutions are working in various fields such as education, health, recreation and cultural activities, etc. In what follows is given in brief the description of the important institutions.

Akhil Gomantak Harijan Parishad, Calapur (Tiswadi)

The Akhil Gomantak Harijan Parishad, was established at Calapur on April 19, 1966, with a view to imparting useful knowledge, promoting fine arts and other charitable activities to the people belonging to the backward classes of the district. It was registered under the Societies Registration Act, 1860. The total number of its members was 1,500 in 1972.

The institution in the year 1971-72 had assets worth Rs. 10,000.00. During the same year, it had an income of Rs. 2,000.00 while the expenditure incurred was Rs. 2,000.00 too. It received grant-in-aid to the tune of Rs. 10,000.00 from the Government.

In 1968, the institution with the help of Khadi and Village Industries Commission established a leather Marketing Depot of Panaji, with a view to supplying cheap raw materials to the needy, and distributed tools worth Rs. 10,000.00 free of cost to poor cobblers. The institution assisted the people to avail the facilities as much as possible. It also organised a Conference on 15th May 1966, to press for the issue of the notification to declare the Scheduled Castes and Scheduled Tribes communities in Goa, Daman and Diu, under the provisions of the Constitution of India.

The Institution at present is running a number of *Balwadis* in the district.

Associacao de Caridade of Calangute (Bardez)

The Associacao de Caridade of Calangute, is located at Cobrawaddo, Calangute and was established in February 1872 with a view to providing shelter to helpless and destitute persons and working for their uplift. The institution has assets worth approximately Rs. 45,000.00. In the year 1972, its annual income was of Rs. 2,551.00 while its expenditure amounted to the tune of Rs. 2,467.00. The total number of members enrolled stood at 100 in the year 1972. The expenditure of the institution is met from contributions from generous members and private institutions. Annual contribution worth Rs. 1,200.00 is received from the Calangute Comunidade. The institution however, did not receive Government aid. In the year 1972, the association completed the Centenary of its foundation.

Associacao dos S. S. Coracoes de Jesus e Maria, Aldona (Bardez)

The Associacao dos S. S. Coracoes de Jesus e Maria situated at Aldona, was instituted as early as 1887 with the sole ambition of providing welfare services to the poor and needy.

The institution has assets worth Rs. 18,000.00 in addition to its own building worth Rs. 58,000.00. The cost towards the building was borne out of the donations given by the people. The total number of members enrolled stood at 8 in the year 1972. The institute has no fixed income of its own. Its expenditure amounts approximately to Rs. 6,000.00 per year.

The Institute runs an Asylum for twenty-eight persons where some of the inmates are treated free of charge. The institute once maintained a well-equipped hospital. However, it has now been ceded to the Government. The hospital treated approximately 60 to 70 patients. The institute does not receive any aid from the Government. However, Comunidade Fraternal of Aldona gives an annual aid of Rs. 600·00.

Bal Bharati Vidyamandir, Ribandar (Tiswadi)

The Bal Bharati Vidyamandir was established in 1962 at Ribandar with the object of promoting educational activities at Ribandar. The Vidyamandir runs a secondary school at Ribandar since June 1962. The managing trust consists of three members which look after the administration of the school business. The school received a grant-in-aid to the tune of Rs. 1,38,585·00 from the Government. It has assets and property amounting to Rs. 1,50,000·00. The annual expenditure of the school came to Rs. 1,38,585·00 approximately. The trust proposed to construct a building for the school at a cost of Rs. 4,00,000·00.

Chowgule Education Society, Vasco-da-Gama (Mormugao)

The Chowgule Education Society, located at Vasco-da-Gama was established in the year 1929, with a view to imparting education and developing the intellectual, moral, emotional, physical and aesthetic facilities of the students of the area.

The society runs a school known as St. Joseph Institute, providing instruction upto S.S.C.E. level. The total number of students enrolled in the year 1973 was 606. The society received Government grant-in-aid worth Rs. 1,18,311·00.

Students are encouraged to take active part in various sports and athletic activities conducted by the school. Besides, the school also conducts various curricular and extra-curricular activities with a view to develop the inherent talents of the students.

Franciscan Sister of Mary (Bicholim)

Franciscan Sisters of Mary is an institution located at Bicholim. It has been established on March 25, 1961, with a view to providing educational and medical facilities to all persons, irrespective of caste or creed.

The Institution was registered under the Civil Administration and Registrar of Societies, Panaji. The managing body of the society consists of a President, a Secretary and a Treasurer. It has five members.

Assets in the form of land, building and furniture are worth Rs. 1,08,350·00. During the financial year 1971-72, its income was Rs. 10,177·00 and its expenditure was to the tune of Rs. 9,712·00. The institution received aid worth Rs. 2,500·00 from the State Social Welfare

Board. The institution also collected Rs. 9,000·00 by way of contributions and donations from the people.

The institution runs a dispensary and a maternity hospital. In the year 1971-72, 735 men, 4,201 women and 3,721 children were treated and given necessary medical assistance. In the maternity hospital 205 anti-natal, 175 post-natal and 106 maternity cases were treated. Besides these activities, visits to distant villages are carried out, in order to render help and necessary assistance to the needy and poor people.

Goa Cultural and Social Centre, Panaji (Tiswadi)

The Goa Cultural and Social Centre, one of the prominent institutions with its headquarters at Panaji, was established on January 16, 1969, with the sole aim of developing educational, cultural and social activities in the district irrespective of caste and creed. It is registered under the Registration of Societies Act, 1860. The governing body of the Centre consists of five members composed of President, Vice-President, General Secretary, Joint Secretary and Treasurer. The total number of members enrolled stood at 60.

The Centre has assets worth Rs. 800·00. During the year 1972-73, its annual income was Rs. 3,000·00 while its expenditure also amounted to Rs. 3,000·00. However, the Centre so far, has not received any grant-in-aid from the Government. The institution makes a valuable contribution towards the upliftment of the educational, social and cultural standards of the community as a whole. This is done by means of organising cultural shows, songs and folklore dances, sports, conferences, debates, exhibitions, meetings, symposiums, etc.

Similarly, the Centre takes active part in promoting social services for the welfare of the poor people, by giving free medical advice and treatment. Necessary encouragement and incentives are provided to the students by extending them necessary financial assistance. Grants or loans are made available to the deserving students, belonging to the economically lower strata of the society. Every year a shield is given to the student who stands first in the S.S.C. Examination, thus rewarding talented students. It maintains a library. It also undertakes publication of books, souvenirs, pamphlets, in order to diffuse knowledge amongst the masses. It also patronizes civic sense among the members of the community. Besides these activities the Centre helps the members of the community in seeking employment opportunities in the territory.

Goa Education Society, Panaji (Tiswadi).

The Goa Education Society located at Panaji was established on 26th January 1962 with a view to promote education in the district. It is registered under the Societies Registration Act, 1860, and its constitution duly appoved by the Government on 21st April 1965. The governing

council of the educational society consists of a President, two Vice-Presidents, four Joint Honorary Secretaries and two Joint Honorary Treasurers. The total number of members during the year 1975-76 stood at 60. It has assets and property worth Rs. 27,71,132·00 approximately. The annual income of the society during the year 1975-76 was Rs. 1,75,496·00 while its expenditure was to the tune of Rs. 2,13,752·00. The society at present runs two colleges, *viz.*, Dhempe College of Arts and Science and S. S. Dempo College of Commerce and Economics, both of which are located at Panaji.

Gomant Vidya Niketan, Margao (Salcete):

The institution, Gomant Vidya Niketan of Margao, was established in 1912 by nine young and enthusiastic members. Under the Portuguese rule, a need was felt for uniting together different sections of Society in Goa for the social, religious and cultural development. The institution was also originally known as Saraswat Brahman Samaj. The main object of the institution is to promote physical, intellectual and moral progress of the public in general and young people in particular by providing them with the means for the achievements of these objectives. It is recognized by the Government and its bye-laws were published in 1918. There is a General Assembly which consists of all the members of the institution and is vested with the supreme powers about the control of the institution.

The Executive Committee is composed of three members, one being the President, one Treasurer and one Secretary. It is in charge of the regular functioning of the institution and executes the resolutions passed by the General Assembly from time to time in fulfillment of the objectives of the institution.

The institution runs its own library which includes 20,000 books and about 200 readers take its benefit daily. They also organise series of lectures by prominent persons from different walks of life. The lectures serve the purpose of educating the people. In addition to the general library, there is also a small reference library. The books in the reference library were donated by the late Kashinath Damodar Naik who was also one of the founder members of the institution. There are about 4,000 reference books and the research students from Margao in particular take its benefit. There is also a publication committee which brings out books on social, religious and other subjects.

The total assets of the institution were Rs. 8,35,537·00 in the year 1972-73. Its income during the same year was Rs. 79,157·00. It received from the Government, grant-in-aid of Rs. 5,000.00 for the library and Rs. 2,053·00 for the cultural activities in the year 1972-73. The Gomant Vidya Niketan celebrated its Diamond Jubilee in the year 1972. It is housed now in its own three storeyed building situated in the heart of

Margao. Besides the library rooms, reading rooms, it has its own audience hall for holding meetings, dramas, cultural programmes, etc.

Institute Menezes Braganza, Panaji (Tiswadi):

The Institute Menezes Braganza, previously known as 'Instituto Vasco-da-Gama' came into existence in 1871 with a view to foster the growth and advancement of culture through speech, writing, action and exhibition, among the people in general. The Institute promotes talks, lectures, symposia, art exhibitions and other collective cultural activities in matters that are of special importance to the education in the field of letters, science and fine arts.

In the year 1973-74, the Institute had 24 active members, 14 honorary members, 7 corresponding members and 3 supranumerary members. The annual income of the institute during the year 1973-74 was of Rs. 5,000·00.

The Institute functions in its own building and has an Art Gallery and some precious Philatelic and Numismatic collections. The Institute also regularly publishes a bulletin of its own known as 'Boletim do Instituto Menezes Braganza'.

The Institute celebrated its centenary in the year 1971.

Institute of Social Service, Panaji (Tiswadi) :

The Institute of Social Service was established as early as 1952, with its headquarters at Panaji, with the aim of developing educational, social and cultural activities of the district, especially to the women, irrespective of caste and creed. The income of the Institute came to Rs. 36,492·00 in 1972 and the expenditure was to the tune of Rs. 33,805·00 during the same year. The Institute received aid of the sum of Rs. 1,500·00 from the Central Social Welfare Board.

As early as 1955, the Institute had two needle work centres, located at St. Inez and Portais, but since 1965, these centres were converted into training-*cum*-production centres, with the object of providing vocational training in various categories, such as embroidery, etc. Besides recreation facilities, a sense of thrift is also inculcated amongst the women and a number of savings accounts have been opened in their names. At present about sixty women of different stratas of society avail the benefits of this training. The Institute has also dispensaries in both these centres, with a weekly consultation of around 70 to 80 patients. The patients are mostly women, young and old, and specially children and infants. They are provided medical aid, assistance, advice to expectant mothers, nursing mothers and infants. The Institute receives free gifts of medicines, grains, milk, etc. from the Catholic Relief Services, U. S. A. which are distributed once in a month to 120 mothers and children, mostly belonging to the poorer sections of society.

In 1968, a new fibre unit project, located at Betim, was started with a view to provide employment to unemployed women. In the initial stages, the project was aided by grants given by the Khadi Commission, Bombay. However, the unit is self-supporting at present. The Unit makes fancy articles such as handbags, table-mats, door mats, coasters, etc. out of banana and sisal fibre, which are in great demand both locally and abroad. There are 32 women working in the centre whose average salary ranges from Rs. 30·00 to Rs. 135.00 per month. Most of the staff members are honorary workers.

Ishaprema Niketan, Assagao (Bardez)

Established in May 1966 with the sole objective of providing social services for the helpless and disabled old men, the Ishaprema Niketan is located at Assagao. The institution is run by the Ishaprema Niketan Sangh. It is registered under the Societies Registration Act XVI of 1860 and under P. T. Act of 1950. The institution is housed in a spacious building. Property worth approximately Rs. 10,000.00 was donated to the institution. The institution has no fixed income of its own. Its annual expenditure amounts to Rs. 10,000.00. In the year 1971, the average number of inmates was 10. The institution arranges for the maintenance of its inmates and they are treated with love and affection of a family, irrespective of caste and creed. It also looks after approximately 49 babies, specially poor and orphans. It supports them and provides for their upbringing and education.

The institution renders yeoman service to all those who are physically handicapped and involuntarily unemployed and helps thereby to augment social welfare.

Kala Academy for Goa, Daman and Diu, Panaji (Tiswadi)

The Government of Goa, Daman and Diu had established a 'Natya Academy' in the year 1965, with a view to promoting the dramatic art and culture in the territory. An institution *viz.*, 'Academia de Musica' was also simultaneously functioning in Panaji since pre-liberation, imparting training in western music. In order to extent and widen the scope of the activities of these institutions and also encourage other arts such as music, drama, literature, fine arts, plastic arts, etc. a full-fledged Academy for art *viz.* Kala Academy has been established since 1970 as per the directives of the Government of India. 'Academia de Musica' then merged with Kala Academy as its western music wing.

In the year 1974, the Academy had 20 members with a Vice-Chairman and Secretary. Besides, the Honourable Chief Minister of Goa, Daman and Diu is its Chairman. Kala Academy has built its own Art Complex in Panaji which provides all sorts of necessary facilities in the field of

performing arts like drama, dance, puppetry and music, visual arts like paintings, applied art and art teachers' training, fold art and literature.

With a view to promoting talent among the youth artists in fine arts, the institution has established 'Goa College of Art' affiliated to the University of Bombay in 1972. The Academy has also started 'Faculty of Music' on the line of 'Gurushishya' traditions since 1972 for imparting training in Indian, Classical, Vocal and instrumental music at higher level. The Academy also conducts puppet and leather puppet shows and participates in the seminars and drama festivals. Besides, it organises one-act play competitions in Marathi and Konkani and various cultural programmes and celebrates anniversaries of great artists including poets and musicians.

The Academy has also decided to start a theatre training course in Goa during the Fifth Plan Period, on the lines of the National School of Drama and Asian Theatre, New Delhi. to promote the activities in the field of drama.

The Academy also maintains a library consisting of 1,630 books on various subjects and a museum which consists of 834 musical records.

Mathagramasth Hindu Sabha, Margao (Salcete)

The Mathagramasth Hindu Sabha came into existence at Margao centuries ago with a view to creating religious, social, cultural and educational consciousness among the people in general and to safeguard interests of Hindu community in particular under an alien rule not kindly disposed towards Hindu community. It was founded as a Hindu Kaivari Sarvajanik Sabha and was renamed as Mathagramasth Hindu Sabha after giving it an official constitution and was registered as such on the 8th June, 1928.

There is a Central Managing Committee to look after the day-to-day affairs of the institution, headed by the President with sub-committee for its threefold *viz. utsava mandal, smashanbhumi vyavastha mandal* and *shikshan mandal*. The *utsav mandal* arranges a number of religious festivals such as *Shishirosthav, vasant puja, sravani somavar, dhalo*, etc. at the Damodar Samsthan of Zambaulim, every year, while the *smashanbhumi vyavastha mandal* maintains a crematorium at Paji-fond, Margao, meant for Hindus of all classes with free service to the poor. The *Shikshan mandal* conducts educational activities through Damodar Vidyalaya, Margao and Shri Damodar Dip. Ed. Training College, Margao.

The annual standing income of the Hindu Sabha is estimated at Rs. 3,500.00 approximately. The average annual donations and miscellaneous income comes to about Rs. 30,000.00 and Rs. 10,000.00 respectively. The Hindu Sabha was given grant-in-aid for the construction of school building to the tune of Rs. 10,000.00 by

the Government. It has its own landed property and runs a High School *viz*. Shri Damodar Vidyalaya, Margao and a trainingco llege, Shri Damodar Dip. Ed. Training College, Margao, besides four primary schools and montessori.

Mormugao Education Society, Vasco-da-Gama (Mormugao)

The Mormugao Education Society, located at Vasco-da-Gama was established on 23rd August 1971, with a view to provide, establish, endow, maintain, control and manage schools, colleges, and other educational institutions and impart education to the student population of the area.

It is registered under the Societies Registration Act, 1860. The Managing Committee of the Society is composed of a President, a Vice-President, two Joint Secretaries and a Treasurer. During the year 1975-76 the total number of members enrolled was 60.

The assets of the society were Rs. 7,265 in the year 1975-76. During the same year its annual income was Rs. 4,10,677 while its expenditure also amounted to Rs. 4,10,677. The Society received Government grant-in-aid to the tune of Rs. 1,19,936.

The Society runs a College of Arts and Commerce and a Higher Secondary Section in Arts, Commerce and Science. The total number of students enrolled in the year 1975-76 was 549.

Pratibha Friends' Circle, Borim (Ponda)

The Pratibha Friends' Circle, is a social institution located at Borim, and established on April 5, 1962, with an objective to promote welfare services in the village.

The management of the Institution is vested in an Executive Committee, consisting of a President, Vice-President, Treasurer and two Secretaries. The total number of members of the Institution during the year 1972-73 stood at 70. It has assets worth Rs. 12,913. The annual income of the Circle during the year 1971-72 was Rs. 4,617 while its expenditure came to around Rs. 6,502. The institution also received grant-in-aid worth Rs. 1,500 from the Government.

The institution runs a full-fledged library, named *Pratibha Vachanalaya* having over 3,000 books with a view to imparting knowledge among the masses. The benefit of the facilities extended by the library is taken by approximately 2,000 persons.

The institution conducts a music class at Ponda where students are given training in vocal and instrumental music. It also conducts sports activities. The institution also takes an active part in developing the Siddhanath hill as tourist resort.

Shri Aurobindo Society, Panaji (Tiswadi)

The Shri Aurobindo Society, Panaji, was established in 1972 and is a subsidiary branch of Shri Aurobindo Society, Pondicherry. The main objective of the society is to work for the advent of a progressive universal harmony. During the year 1973-74, the society had assets worth Rs. 2,500. During the same year the society also received grant-in-aid worth Rs. 5,858 from the Government.

During the first year of its existence in the district i.e. 1972-73, the branch society celebrated the Birth Centenary of Shri Aurobindo in collaboration with the Centre of Post-Graduate Instruction and Research, Panaji, the Institute Menezes Braganza, Panaji, Swami Vivekanada Society, Panaji and the State Level Committee of Goa, Daman and Diu.

During the year 1973-74, the society has helped to establish two society centres, one each at Margao and Mapusa. Similarly, two significant activities, *viz.* the collective study of the important literary works of Shri Aurobindo, and the teaching of Sanskrit at the branch has been undertaken by the society during the year 1974-75. The study circle has also been doing significant work in educating the Goan public in several important social, economic, cultural and educational fields.

Shri Damodar Vidyalaya, Margao (Salcete)

The Shri Damodar Vidyalaya is an age-old educational institution of Margao in contributing towards the socio-cultural progress in the district. The Vidyalaya has a glorious history and commendable traditions to its credit. It celebrated the Diamond Jubilee of its dedicated service of sixty years to people on the 23rd January 1973. It conducts classes upto S.S.C. with English and Marathi as a medium of instruction. The Vidyalaya has its own playground and a library.

Sisters of St. Joseph of Clunny, Verna (Salcete)

The institution of Sisters of St. Joseph of Clunny, commonly known as " Dr. Roque Ferreira's Memorial Maternity Hospital " is located at Verna, Salcete.

It was established on January 5, 1964, with a view to promoting education and health in the village. Its Managing Committee is composed of nine members.

The institution had assets worth Rs. 1,000 and its annual income and expenditure for the year 1971-72 came to Rs. 2,91,290 and Rs. 35,129 respectively. During the same year, the institution received a grant of Rs. 2,000 from the Government.

The Institute opened a Technical Training Centre at Vasco-da-Gama, conducting various courses such as tailoring, craft, etc. Courses in shorthand, typewriting, accountancy are also conducted by the centre. It

also runs one Day-care Centre for the pre-school aged children of working mothers.

In the year 1971-72, 175 in patients were treated and 8,907 outdoor patients were given necessary medical assistance in the hospital. Serious cases are brought to the Government hospitals at Margao or Panaji.

Besides these activities, house to house visits are conducted in the village and nearby areas, providing necessary advice to expectant mothers on nutrition, child care, hygiene, family budgeting, etc. The institution had distributed to children suffering from debility, 1,400 tins of condensed milk.

St. Cecilia Music School, Panaji (Tiswadi)

The St. Cecilia Music School, located at Panaji was established in 1972 with a view to imparting musical knowledge to the students of the area in particular and promote educational, cultural and social development in general.

During the year 1973-74, the institution had assets and property worth Rs. 1,221·09. Its annual income during the same year was Rs. 5,213·55. The total number of members enrolled till December 1974 was 117.

In the year 1973-74, the St. Cecilia Music School conducted various musical and cultural programmes in different parts of the district. The school has a musical choir of its own. The school also prepared students in music for the Trinity College Examinations. The school's orchestra also gives public shows from time to time.

Swami Vivekananda Society, Panaji (Tiswadi)

The Swami Vivekananda Society registered under the Societies Registration Act, 1860, came into existence on 22nd August, 1963, with a view to imparting and promoting the study of the philosophy and its principles as propounded by the Swami Vivekananda, the great philosopher and to carry on educational, social, cultural, literary and charitable activities in the district.

The governing body of the society is composed of one president, one Vice-President, one Secretary, one Joint Secretary and one Treasurer. The total number of members enrolled during the year 1973-74 was 143. The society had assets and property worth Rs. 40,963·22 in the year 1973-74. Its annual income during the same year amounted to Rs. 52,651·83. The society also received grant-in-aid worth Rs. 19,775·00 from the Government.

The society runs a school of Indian Music where students are given training in various subjects such as vocal classical music, harmonium, tabla, violin and dancing. Various music examinations i.e. instrumental

and classical are conducted regularly. An annual music competition conducted by the school is largely attended. The school is affiliated to Akhil Bharatiya Gandharva Mahavidyalaya Mandal, Miraj.

The society also runs a short term yoga course for ladies and gents with a view to attaining physical and mental relaxation. About 175 yoga lovers from all walks of life availed the benefit of this course. A *Shishu Vihar Kendra* is also run by the society for the benefit of the children between 3 to 5 years of age, in order to bring their all-round development. Besides these activities, the society organizes in its auditorium at Junta House, Panaji a series of lectures, talks, speeches, by prominent persons from different walks of life and undertakes various cultural programmes.

Swaramanch, Margao (Salcete)

The Swaramanch was established at Margao, in the year 1964 with an objective to promote the advancement of arts like classical music, dance, acting, dramas etc. in the district.

During the year 1973-74, the institutions had assets worth Rs. 5,177·00. Its annual income during the same year was of Rs. 4,571·00. The affairs of the institution are looked after by the working Committee consisting of one President, one Vice-President, two Secretaries and one Treasurer. The total number of members enrolled are 73. The institution also received a grant-in-aid worth Rs. 3,993·00 from the Government.

The institution runs a music school known as Sangeet Vidyalaya and is affiliated to the *Akhil Bharatiya Gandharva Mahavidyalaya.* The school conducts different courses in music and organizes various musical and singing competitions. The institutions also organizes lectures on arts with a view to serve the purpose of educating the people.

Besides the above described institutions, there are many other social and educational institutions in the district, the list of which is given in the Appendix 26.

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CHAPTER 19—PLACES OF INTEREST

ALORNA

The village of Alorna (Halarn)[1] at 15.43′ 00″ North Latitude and 73° 54′ 30″ East longitude, is a quiet village located in the Pernem taluka. In order to reach the village one has to cross the river Chapora or Colvale by a canoe. The population of the village as per the Census of 1971 stood at 2,284. The main crop grown in the village is paddy, and *nachani* is the subsidiary crop. A private medical practitioner visits the village once a week with a view to rendering necessary medical assistance to the villagers.

Fort of Alorna

The fort of Alorna lies to the north-east of Pernem, on the right bank of the Chapora river. It was seized from the Bhonsle, the Maratha Chief of Sawantwadi, north of Goa, on the 4th May 1746, by the Portuguese Governor Marquis de Castello Novo, for whom this acquisition earned the title of Marquis of Alorna. It was, however, restored to the Bhonsles in 1961 in consequence of a royal mandate but the Portuguese under the Dom Frederico Guilherme D'Souza, found occasion to recapture it on the 25th of August 1781. At present the fort is in a dilapidated condition.[2]

ANJIDIV

Anjidiv (Anjidiva) Island in North Latitude 14° 45′ 30″ and East Longitude 76° 06′ 45″, lies 8 kilometres to the south-west of Karwar, in the Karnataka State. The name Anjidiv is of doubtful origin. According to one account, it is Adyadvipa or the Early Island ; according to a second, it is Ajyadvip or the Island of Clarified Butter ; according to a third, Anjidipa or the Five Islands ; and according to a fourth, it is Ajdvipa or the Island of the Goddess Aja. It is said to have been called the Early Island because it was in existence before Parashuram reclaimed the Konkan from the sea ; and it is said to have been called the Clarified Butter Island because it supplied Parashuram with clarified butter for a horse sacrifice. The Goddess Aja, who according to the fourth account gave her name to the Island, is said to have fled from it to Ankola when the Arabs destroyed her temple. It now comes under the jurisdiction

[1] The spellings of place names as written in the Devanagiri script are given in brackets.

[2] Fonseca J. N. da, *An Historical and Archaeological Sketch of the City of Goa* Bombay 1878, p. 50; Telles R. M. *Pracas de* ; *Alorna* in *O Oriente Portugues* No. 19-21 of 1938, p. 304.

of Canacona taluka in the territory of Goa, Daman and Diu. It has a population of only 11 as per the Census of 1971.

The Island is irregular in shape and stretches for a mile from North to South and 1/6 mile from East to West. The south-west and western parts of the Island are steep and rugged and dangerous to all kinds of vessels. A small cove in the middle of the east or landward face, in about twenty feet of water, gives anchorage to vessels with a tonnage of as much as 1,000. It also serves as a shelter for native craft during heavy northerly or westerly gales. The strait or channel between Anjidiv and the mainland is safe for ships, being six to seven fathoms deep and without shoals or rocks. Around the Island the depth of water is ten to twelve fathoms. To the east of Anjidiv near the Karwar coast, are two rocky islets, which, with another about four miles to the south-east, make a fairly good roadstead where, if necessary, a ship may find shelter during the south-west monsoon. The rocks of the island are granite and laterite mixed with fine red earth. Its western or seaward side is barren and rocky, but the eastern or landward side is enriched with cocoa-palm groves and groups of mango, jack, custard apple, orange and lemon trees grom the Karwar coast, the remains of ramparts, a few white houses and two churches showing among the lofty palm trees, make the view of the island picturesque and interesting.

The Island is inhabited on the eastern shore. The people make their living by growing cocoa-palms and by fishing ; large number of fish being caught, dried and sent for sale to the mainland. The island has no rice land, the little rice that is needed for local consumption being rought from the mainland.

The island is supplied with water from two ponds. One near the middle of the island is about thirty feet square, but its water is unwholesome and is not used for drinking. On a slope about 200 yards to the west of this pond a natural spring flows throughout the year into a granite cistern about three feet in diameter.

During the first year after the arrival of the Portuguese in India (1,500-1,510), before they gained Goa, they set great store on Anjidiv as a station for repairing and watering their ships.[1] After the capture of Goa in 1510, Anjidiv ceased to have any importance to the Portuguese.

Fort of Anjidiv

During the Government of the Portuguese Viceroy, Conde D'Alvor a new Fortress was built in 1682 on the island and it was made one of the most pleasant Portuguese fortifications in India.[2] In the same year,

[1] Kerr's *Voyages*, II, 386, 405, 429, 456.

[2] J. B. B. R. A. S. XI 309, Telles R. M., *Fortaleza*; *de Angediva* in *O.P.* Nos. 19-21 of 1938, pp. 311-27.

Sambhaji who had quarrelled with the Portuguese, determined to take the island, but, in July before the stormy season was over, the Goa Government sent a body of troops to defend it and the Marathas were forced to give up the attempt[1]. In 1720, Hamilton noticed Anjidiv as an island of the Portuguese about two miles from Batcoal (Bhatkal) which they had fortified in case the Maskat Arabs and the Shivajis, that is the Marathas, should seize it[2]. In 1758, the French Scholar Anquetil du Perron described Anjidiv as belonging to the Portuguese, fairly fortified, and producing the best cotton stockings on the coast[3]. It witnessed a fight between the Indian navy and the Portuguese navy in November 1961 before the Liberation of Goa on 19th December 1961. The island was chiefly used as a penal settlement for Goa and Diu. The convicts were taught to spin thread and yarn and to weave stockings, which were the best in India and very cheap[4].

Church of Nossa Senhora das Brotas

It was constructed by the first Portuguese Viceroy, Dom Francisco de Almeida in 1506 and was reconstructed in 1682 along with the Fort. It has three altars[5].

ANJUNA

Anjuna (Hanjun), a village in the Bardez taluka, lies at 15° 35′ 30″ North Latitude and 73° 45′ (50″ East Longitude. It is at a distance of about ten kilometres from Mapusa, the headquarters of the taluka and about twenty kilometres from Panaji, the district headquarters. The village has a population of 5,894 according to the Census of 1971. Education facilities to the village students are provided by six primary schools, two middle schools, a secondary school and a convent. There are regular buses plying from Mapusa to Anjuna and *vice-versa*. Wells and springs form the main sources of water supply. Four clubs *viz.* Armstrong Sport's Club, Anjuna Villagers' Association, Athletic League and Chapora Yuvak Sangh are functioning in the village. There is a Health Centre, a post office and a branch office of the Bank of Baroda.

Chapora Fort

The fort of Chapora, 8 miles to the north-north west of Aguda, is situated on the western extremity of Bardez on a high bluff point on the south of the mouth of the river of the same name. The work of its construction was started in 1717 by the Count of Ericeira, the then Viceroy

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1 Orme's *Historical Fragments*, 111, 122.

2 *East India* and *Persia*, 1, 277.

3 Zend Avesta, *Discourse Preliminaire*, ciii.

4 Parson's Travels, 22.

5 Catao F.X.G., *Anuario da Arquidiocese de Goa e Damao* Bastora, Goa, 1955, p. 204.

of Goa, and was completed during the administration of his successor, Francisco Jose de Sampaio e Castro.

This fort was intended for the defence of the mouth of the river and was captured by the Sawant Bhonsle of Sawantwadi in 1739. The Bhonsle was, after a precarious tenure of two years, forced to surrender it to the Portuguese. This fort began to be of less consequence after the acquisition of the province of Pernem by the Portuguese, and is now in a somewhat decayed condition[1].

Vagator beach

It is a lovely palm fringed beach with Chapora fort in the background. Situated on the Caisua bay along the Chapora river basin beyond the far end of Calangute, it can be reached by a tarred road. A number of tourists visit the beach during the summer months. It is a favourite beach of hippies who reside here to seek seclusion and peace of mind.

ARVALEM

Lying at 15° 33′ 30″ North Latitude and 74° 02′ 00″ East Longitude at a distance of about nine kilometres from Bicholim, the headquarters of the taluka bearing the same name, and about three kilometres from Sanquelim, is located the village of Arvalem (Harvale), covering an area of 705 hectares. It has a population of 1,023 according to the census of 1971. There are two primary schools that provide educational facilities to the village populace. Wells and rivulets form the sources of water supply.

Arvalem attracts tourists from far and near due to its unique location its palmy surroundings and availability of comfortable approach roads from all sides, and also the help of antiquity surrounding the place.

Rudreshvar Temple

Amidst fascinating natural surroundings is situated the temple dedicated to Rudreshvar. It is surrounded by areca groves and the stream of water formed by the Arvalem falls passes by the stairs which gives an access to the temple. It is a modest stone structure and exhibits an ingenious simplicity in its architecture and painting. The temple faces the east. As soon as one reaches the village, a massive stone gateway is found at the entrance, followed by a flight of steps which leads to the temple, located on a lower plain. The *garbhagriha* of the temple contains a *shivalinga* which is venerated as Rudreshvar. *Mahashivratra* is the important festival observed and during the occasion, dramas are staged.

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[1] Fonseca, *op. cit.*, p. 50; Telles R. M., *Forte de Chapora*, in *O Oriente Portugues*, No. 19-21 of 1938, p. 233.

Arvalem Caves

The celebrated caves of Arvalem, belonging to a remote era, are in a westerly direction not far away from the temple of Rudreshvar and are of archaeological interest. A mythical background is attached to these caves. Some are of the opinion that these caves have been carved by the travelling Buddhist monks. An inscription is noticed on a *shivalinga* with a circular top in cave No. 2. It is in Sanskrit and in Brahmi characters of the 7th century A. D. It reads as *Sambalura-vasi Ravih.*[1]

Arvalem water-falls

Leaving the temple of Rudreshvar, one can descend the staircase to look at a majestic waterfall shedding its exuberant silvery showers. The beautiful fall, with a head of about 70 feet, forms a sizeable lake at the bottom which offers a temptation to seasoned swimmers. The fall is best seen when in full flux, just after the copious monsoon, when it presents a rapturous, ravishing and riotous aspect.

BANDORA

Bandora (Bandode) in North Latitude 15° 24′ 15″ and East Longitude 73° 58′ 50″, is a village at a distance of three kilometres to the west of Ponda, the headquarters of the taluka bearing the same name in which it is located. It has a population of 5,991 as per the Census of 1971. The village was formerly known as *Bandhavatika* and is mentioned in an inscription as Bandawada. It subsequently came to be known as Bandiwade. In the Portuguese writing, it is referred to as Bandora.

The village covers an area of 1,205·7 hectares. Agriculture forms the main occupation of the villagers, the principal crops being paddy, coconut, arecanut, etc. Educational facilities to the village populace are provided by six Government primary schools and two high schools conducted by private institutions. A primary health centre and private medical practitioners cater to the curative and preventive health needs of the people. Wells and a tank form the main sources of water supply, though a part of the village has been provided with piped water supply. There are two co-operative societies; one multi-purpose and the other a dairy society. Recreational facilities are provided by a club *viz.* The Bandora Youth Club and a library conducted by an organisation known as the Vikas Mandal. Besides, there is a Balwadi or nursery-school and a *Samaj Kalyan Kendra*, and a post office.

History

The village has a great antiquity which can easily be established from the inscriptions found in the village. The slab containing three

[1] *See* Chapter 2—History, for the description of the caves.

inscriptions of three different dates, found near Jain Basti at Bandora, is maintained in the museum at Old Goa. The first inscription on the slabs was issued by the Vijayanagar Emperor, Devaraya II in *Sake* era 1347 corresponding to A. D. 1451. It is in Sanskrit. The other two inscriptions recorded on it are in Kannada script in Sanskrit language and are dated Saka 1354 corresponding to A.D. 1432 and *Saka* era 1354 corresponding to A. D. 1433. These inscriptions record that Hariyana-Suri or Haryarsuri, pupil of Simhanandacharya, who was himself a pupil of Vidyanandsvami, died on the second date and that the Memorial Slab (*nisidhi*) was set up by Simhanandi. It registers the gift of the villages Vagurumbe and Akshya, made on the first and the third date respectively, to the Neminath-basti at Bandora. The gifts were entrusted to Muniyaina, pupil of Simhanandacharya and were to be administered by his sons and grandsons. It is also stated that Triyambaka son of Lakkappa was then governing Goa on behalf of Devaraya II. An endorsement at the end of the record states that the place Bandora (Bandewadi) was established by a King named Sripala in early days, and Virugapa, son of Mangadanda, built the temple of Nemitirtha there, and that the latter was renovated at the instance of Simhananda.[1]

Gopal Ganapati Temple

The temple dedicated to Gopal Ganapati is situated on the slopes of a hillock amidst beautiful natural surroundings and is known as Farmagudi.

It is customary with the inhabitants of the area to perform a flag hoisting ceremony on the hill every year on *Anant Chaturdashi*. According to local tradition, the Maratha flag was hoisted on the hill near the Fort of Ponda under the Royal Order (farman) of the Maratha ruler Chagrapati Sambhaji on *Anant Chaturdashi* in the year 1683. The Maratha ruler had in his mind the liberation of Goa. The Ponda fort was the base of Maratha Military operations against Goa. Sambhaji seems to have issued a Royal Order to his commander of Ponda Fort in August 1683. Accordingly, the banner of victory (*gudi*) against the Portuguese was hoisted by the commander on the top of the hill. The Portuguese Viceroy attacked the Fort of Ponda in October 1683 but had to beat a hasty retreat following the sudden appearance of Sambhaji with a large army. Farmagudi commemorates this event.

It is said that the stone image of Gopal Ganapati was discovered by herdsmen while grazing their animals near the hill and was later installed in a small shrine with a thatched roof. The work 'Gopal' means cowherd and the God Ganesh worshipped by herdsmen came to be known as Gopal Ganapati.

[1] Gune V. T., *Ancient Records of Goa*, in *New Era* II, 8 : p. 19 of 1966, Panaji, Goa.

The temple was built by the late Shri D. B. Bandodkar, an inhabitant of the place and former Chief Minister of Goa, Daman and Diu. Recently, a bust of the late Shri Bandodkar has been installed in front of the temple. The idol of Gopal Ganapati, made of metal alloy, was consecrated in the temple on April 24, 1966. The ancient image of Ganesh is worshipped at the back of the temple. It is a good specimen of Indian Temple Art and architecture, both ancient and modern.

Mahalakshmi Temple

The temple dedicated to Goddess Mahalakshmi, the main deity of the Shakti Cult, is situated in the heart of the village. The idol is made of black stone. The temple faces the West and it is said to have been shifted to its present site from Colva in the Salcete taluka during the 16th century to save its destruction at the hands of the alien Portuguese power.

Above the main gate is the *nagarkhana* (drum-chamber). The *sabhamandap* or audience hall of the temple is supported by a row of five pillars and a pilaster each on both sides. The *sabhamandap* has a gallery depicting the 24 images of *vyuha* or the Bhagavat sect. This gallery is considered to be one of the rare galleries of wooden images of the Vaishnava sect, available in India. By the side of the Goddess is an idol of Narayan. The temple is surrounded by ancilliary deities (parivar devatas).

The image of Mahalakshmi has a close affinity to that of Mahalakshmi of Kolhapur which is considered to be her main centre of worship or *pith*. She has four hands in which she holds a vessel, a club, a shield and a bail fruit (*Aegle Marmelos Corr*). Her special feature is that she wears a *linga* (phallus symbol) on her head. The Goddess Mahalakshmi was worshipped by the Silahara rulers (750-1030 A.D.) and the early Kadambas kings[1].

A number of festivals are celebrated at the temple. The principal festival is that of Ramanavami which is celebrated from *Chaitra Shuddha* 1 to *Chaitra Shuddha* 11. On all these festive days, dramas are performed at night. Another major festival is that of *Navaratra* celebrated from *Ashvin Shuddha* 1 to *Dassara*[2].

The temple has got a rare gallery of 18 wooden images of Vaishnavite Cult[3].

Nagesh Temple

The temple dedicated to Nagesh is situated adjacent to Mahalakshmi Temple, and faces the west. It has three entrances, one each to the east,

[1] Gune, V. T., *Ancient Shrines of Goa*, Panaji, 1964, p. 18.

[2] Naik, N. B., *Gomantakiya Devalaye*, Rivon Goa, 1959, p. 15.

[3] Gune, *op. cit*, p. 10.

the west and the south. At the outer verandah of the temple, decorative stone sculptures are fixed in the wall on both sides of the door leading to the *sabhamandap*. The ceiling of the *sabhamandap* is supported by five pillars and a pilaster each on both sides. The door leading to the inner hall is plated in silver and has conventional creeper designs over it. The *sabhamandap* has a gallery on both sides that contains exquisite specimens of intricate wood carvings depicting the famous events of *Ramayana* on one side and the wooden images of *Asthadikpal* and *Gandharva*, etc. on the other.

In the inner shrine is a stone *linga*. In front of the *linga* in the outer verandah, is an image of Nandi made in black stone, facing the *linga* in sitting posture. In front of the deity beyond the verandah is a water tank.

In front of the temple is an inscription in Marathi script dated the *Pausha Bahul* 30 of the year 1335 of the *Shalivahan Sake* corresponding to 24th December 1413, of the Vijayanagar King, Devaraya I[1]. The temple is said to have been renovated in the days of Chhatrapati Shahu, the Maratha Ruler of Satara as per the local tradition.

Adjacent to the temple of Nagesh, is an old palace of the King of Sonda[2].

Ramnath Temple

The temple dedicated to Ramnath is also located in the heart of the village. The deity is said to have been shifted from Loutulim in the Sal cete taluka to its present site by the year 1566 A.D. to save its destruction at the hands of the Portuguese. The temple was renovated in the year 1905 and on March 16, in the same year, the deities of Lakshminarayan, Ramnath, Shanteri and Kamaksha were installed in the temple.

The temple is an expensive structure. After entering through the main door, one reaches the audience hall, having hanging galleries on both sides. There is a stage in the audience hall where dramas are performed during festive occasions.

In the sanctuary of the temple there is an image of Lakshminarayan on a high level and a *linga*, that of Ramnath, covered with a plaque,

[1] Gune, V. T., *Ancient Records of Goa*, in *New Era*, II.8 of 1966, p. 19 ; Naik, *op.cit.* p.13.

[2] The State of Sonda, established in 1570, comprised hill parts of modern North Kanara district. The Sonda chieftain was attacked by Hyder Ali, the Sultan of Mysore in 1764. On that occasion, the King of Sonda was given shelter and succour by the then Portuguese Government in the villag of Moule. By the treaty of 17th January 1791, between the Portuguese Government and the King of Sonda, the territories of Ponda, Zambaulim, Panchmahal and Canaccna which were granted to the Sonda king as *inam* by the Maratha King Rajaram by the end of the 17th century, came under the Portuguese rule. According to tradition, the rulers of Sonda potentage were related to ancient rulers of Vijayanagar Empire (*See* Chapter 2—History).

at the centre. Besides, there are the shrines of Shanteri and Kamaksh. In the compound of the temple have been installed ancilliary deities, one of Vetal and the other of Kalbhairava. In front of the temple is a water tank and at the entrance gate stands a traditional *dipmal* (stone lamp pillar). On the northern and southern sides of the temple are constructed the *agrashalas* (residential quarters) with all modern amenities that provide facilities for lodging to pilgrims and tourists.

A number of festivals *viz. Ramanavami, Navaratra* etc. are celebrated at the temple. However, the most important festival is that of *Mahashivratra* which is celebrated at the temple with great pomp, when more than 5,000 people assemble. This festival commences from *Magha Krishna* 12 to *Phalgun Shuddha* 2. During the festival there are *lalkhi* (elaborate palanquin) and *palkhi* (palanquin) processions of deities. A number of dramas are also performed from the day of *Mahashivratra* upto *Dvitiya*.[1]

Shri Kashi Math

Shri Kashi Math is a fairly large *Math* or monastery situated on a hillock, in the midst of green vegetation. The *Math* belongs to the *Madhwa* Sect of *Gauda Sarasvat* Brahmins. Its main headquarters is located at Brahmaghat in Varanasi. According to old tradition, it is in existence since 1541 A.D. The disciples of the *Math* are mainly found in the States of Kerala, Karnataka and Maharashtra, and they have many temples in Kerala and Karnataka States. Many royal honours and privileges are enjoyed by the Math from ancient times.

BICHOLIM

Located in 15° 35′ 15″ North Latitude and 73° 56′ 45″ East Longitude Bicholim (Dicholi) formerly known as *Batagrama*, is a municipal town to the North-East of Panaji, the district headquarters, and has a population of 8,550 according to the Census of 1971. It covers an area of 12.17 square kilometres and gets an annual rainfall of 3,689 mm. It is the headquarters of the taluka bearing the same name. Educational facilities are provided to the town populace by two primary schools and three high schools. There is a Government hospital and a health centre in the town. The town is known for its brass works, especially lamps, and pottery. Besides a metal factory and a cashew factory, other industrial units such as the Goa Steel Rolling Mill and Allied Industries and Radhakrishna Engineering Works are functioning in the town. The town has a consumer's co-operative society and a *samajakalyana kendra*. *Nutan Vachanalaya* and *Sane Guruji Vachan Mandir* provide library facilities to the town populace. People avail of banking facilities through

[1] Naik, *op. cit*, pp. 9-12.

a branch office each of the State Bank of India, Canara Bank and the Bank of India. There are sports clubs *viz.* Bicholim Trophy Association of Football Fans and Club Desportivo de Bicholim.

Macm Lake

Macm lake is located about five kilometres from Bicholim, the nearest town and the headquarters of the taluka. The lake is surrounded by green hills and is an ideal picnic spot, which attracts many tourists.

BORIM

Situated at 15° 20′ 55″ North Latitude and 74° 00′ 30″ East Longitude, Borim (Bori) is a village in the Ponda taluka on the Ponda-Margao road at a distance of five kilometres to the south of Ponda, the headquarters of the taluka bearing the same name and about twelve kilometres from Margao. Known during the olden days as *Badrigrama*, the village consists at present of seven hamlets. With a total area of 1,443·6 hectares, it has a number of streams and rivulets. It has a population of 4,994 as per the Census of 1971. About half of the total population depends upon agriculture for its livelihood. Fishing along the riverside is carried on by a number of villagers, most of the catch being consumed locally. Rice is the staple food of the villagers. There are seven primary schools and an English medium high school, privately managed, in which about 400 students are being educated. The *balwadi* and a health centre have further added to the development and welfare of the village populace. An association of youth called " Pratibha Friend's Circle", engages itself in social and developmental activities. There are a number of sports clubs *viz.* Borim Sports Club, Navadurga Youth Club and St. Xavier's Sports Club.

Navadurga temple

The temple dedicated to Goddess Navadurga, the *gramdevata* (village deity) of the people, is situated in the hamlet of *Deulwada* of the village. The Goddess Durga is worshipped in her aspect of Vijaydurga (of success) and Navadurga (essence of all *durgas*). Durga is one of the fierce or *rajas* forms of the Goddess in the Shakti Cult. According to tradition, the image was established by Kamaladevi, the queen of Shivachitta Kadamba (1150 A.D.). According to another local tradition, the deity was shifted from Benaulim near Margaon town in Salcete taluka during the religious persecution by the Portuguese, to its present site. It is believed that a small idol made of five metals was brought from Karad and installed here later on. The temple surrounded by natural beauty is constructed with a square base *garbhagriha*, *antaralaya* (inner hall) and *sabhamandap*. The *shikhar* (pinnacle) of the temple is quite simple and the tapering roof of tiles adds beauty to its simplicity.

In the inner chamber is the imposing idol of Goddess Navadurga engraved in hard black stone and installed on a raised pedestal admeasuring 125 cm. by 40 cm. The idol is in a standing posture. It is 112·5 cm. in height having a width of 60 cm. and a depth of about 25 cm. It is in the form of Goddess *Mahishasur-Mardini*, killing the demon Mahishasur. She has four hands and in her right and left hands she holds a *chakra* (disc) and a *shanka* (conch-shell) respectively. The figures of *naga* or cobra are visible on the *prabhawal*, surrounding frame, of the idol.

The festivals of '*Ramanavami*' from *Gudipadva* to *Dashami*, '*Sharada-Navaratra*' from *Ashvin Shuddha Pratipada* to *Dassara* and '*Kartika Paurnima*' are celebrated at the temple with great pomp and ceremony.

Facing the temple is the shrine dedicated to Kamleshwar, reported to have been built during the Kadamba period, and which was later on renovated. There is also a shrine which contains the idol of Dattatreya under the cool shade of an *audumbar* (glomerous) or fig tree. The idol of Dattatreya was excellently sculptured out of white marble stone by an Italian artist.[1]

Siddhanath Hill

Located at a distance of about four kilometres from the Ponda-Margao Road, Siddhanath is a beautiful hill which attracts tourists for its enchanting loveliness, idyllic environment and permanently cool weather. It rises to an altitude of 409·65 metres above the sea level and can be climbed from the west. Its nearness to the sea, makes the hill-top pleasantly cool. and the holy temple dedicated to Siddhanath with its waving beautifully wooded top and its wide views of hill and the Zuari river always enchant the visitor. To reach the Butal peak, the highest point of the Siddhanath hill, the visitor has to climb a zigzag path which runs close to the edge of the hillside. Along the path are rows of trees and bushes and one can enjoy the picturesque surroundings while climbing the hill. The Butal peak is crowned with a tuft of vegetation which makes the place pleasant. Perennial springs shed crystalline waters along the slope feeding large areca, coconut and banana gardens. The Butal peak is considered to be the highest altitude in Ponda taluka from where a circular commanding view of surrounding places including the stretch right from Mormugao harbour upto Cabo-da-Rama can be seen.

There is a deep well and beautiful spring which never fails to delight the visitors with its gurgling crystal clear and ever-fresh water. The neighbouring hill popularly known as *Siddha-Dongar* has *bhasma* or holy ashes spread all over.

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[1] Devari, V.R., *Shri Samsthana Navadurga*, Borim Ponda (Goa), 1963.

Siddhanath Temple

Religious interest is added to the hill by the presence of the temple dedicated to Siddhanath. Siddhanath is believed to be an incarnation of Lord Shiva. The temple is reported to have been built during ancient times and was renovated in 1963.

Calangute

Calangute (15° 32′ 30″ North Latitude and 73° 46′10″ East Longitude), a village in the Bardez taluka, is famous all over the country for its fine beach known as the queen of beaches. With a population of 7,600 as per the Census of 1971, the village covers an area of 1,107 hectares. It consists of seven hamlets and lies to the south-west of Mapusa, the headquarters of the taluka of Bardez, and the nearest town. It is linked with the neighbouring villages by *kuchcha* as well as *pucca* roads and regular buses ply between Mapusa and Calangute as also between Panaji and Calangute. Agriculture and fishing form the major occupations of the villagers and some people are engaged in toddy-tapping. Paddy and coconut are the two main crops grown in the village. Wells and tanks form the main sources of water supply. Educational facilities to the village population are provided by three Government primary schools, two middle schools and two secondary schools. It has a *grampanchayat*, a Post and Telegraph Office, a branch office of the State Bank of India and two fair price shops besides a consumer's co-operative society known as *Calangute Vividha Karyakari Sahakari Seva Society Ltd.* It is also provided with electricity. Weekly bazaar is held in the village every Saturday when nearly 1,000 people visit the bazar to make their purchases Coconut and fish are the principal commodities sold in the bazaar. The Gymkhana Club, a Star's Sports Club and Entrapolis de Calangute Club conduct sports activities. Besides, there is an *Asilo* which looks after the old persons who are disabled. This institution is run by nuns.

Calangute Beach

Calangute beach is linked with the main road by a fine tarred road and is famous for its unrivalled scenic splendour that makes it the most popular of all seaside resorts in Goa.

Facing the aquamarine blue expanse of the Arabian Sea it extends in a slight arch of about seven kilometres of curvature terminating on the north with the Baga escarpment jutting out into the sea, and on the south with the Aguada promontory. The beach is of white sand and is studded, with coconut trees. A tourist hostel and a number of bars and restaurants situated along the beach provide refreshments to the visitors. Thousands of tourists visit the beach all around the year and go away utterly charmed by its unique loveliness. Particularly during the summer season

extending from March to May, a large number of visitors, including foreign tourists, throng to the beach.

Baga Beach

The Baga beach is equally beautiful. This beach is ideal for fishing and one can see ample shark fish stored on the seashore. The beach is a holiday resort.

Canacona

Canacona (Kankon), at 15·02′ 00″ North Latitude and 74·03′ 30″ East Longitude, is also known as Shristhal and surrounds the municipal town of Chauri. The local population considers Chauri as a part of Canacona. Wells form the main source of water supply. It is well connected with other parts by *pucca* roads. Rice is the staple food of the people. Educational facilities to the village population are provided by seven primary schools and two middle schools. *Canacona Yuvak Sangha* conducts sports activities in the town.

Mallikarjun Temple

The temple dedicated to Mallikarjun is located at a short distance from Chaudi on the Canacona-Sadashivgad road. The area where the temple stands at present is known as Shristhal, the abode of the God, and amongst the local people, the village of Canacona is known as *Shristhal*. As per the local tradition, the temple is said to have been constructed by the Habbu Brahmins, belonging to the Dravidian race. During the olden days, the temple was a small structure which got dilapidated in the course of time. The present temple was built subsequently and the consecration of the deity took place in *Sake* 1703 (1781 A.D.). According to an inscription visible at the temple, it is clear that the temple was renovated in the year 1778. The present edifice is a spacious one and is well ventilated. It lies below the surface level of the village and can be reached after crossing a gateway or a *mahadvara*. The temple consists of three parts i.e. a *garbhagriha* crowned with a dome and a *shikhar*, antaralaya or *chowk* in between the *garbhagriha* and *sabhamandap* and an outer *sabhamandap* in front. The *chowka* has massive wooden pillars with exquisite carving in the interior.[1] It is decorated by a gallery of wooden images. The image of *nandi* made of black polished stone is seen in the middle of the *chowka*. The door frame of the *garbhagriha* is silver plated with lovely designs as also figures of Sarasvati on both sides and a figure of Ganapati in the lintel. The *garbhagriha* contains a *shiva-linga* dedicated to Mallikarjun erected on a *pindika* and is one foot in height. The phallus symbol is considered as Mahadeva. The *shivalinga* is placed under a beautiful silver plated canopy with exquisite creeper designs over it.

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[1] Gune, *op.cit.*, p.16.

The temple is surrounded on three sides by the *agrashalas* which can accommodate visiting pilgrims and tourists. To the left is a water tank for ceremonial ablution.

The principal festival observed at the temple is that of *Rathotsava* from *Saptami* to *Navami*. During the festival of *Shivratra*, the deity is taken out in a procession, in a decorated *ambari* or a canopied seat upon an elephant. Dramas are staged on both the occasions.

CANDOLIM

Candolim (Kandoli), (15·30′30″ North Latitude and 73·46′20″ East Longitude) an agricultural village in the Bardez taluka with 4,463 inhabitants as per the Census of 1971, has temples dedicated to Goddess Shantadurga and Ghagreshwar. It has a Church dedicated to Nossa Senhora d'Esperanca, originally constructed in 1560 and reconstructed in 1764. The royal fortress of Augada and the Candolim beach and the spring never fail to attract the visitor's notice. Candolim covers an area of 628.9 hectares. Agriculture forms the main occupation of the villagers, paddy being the principal crop grown. Fishing may be considered as a subsidiary occupation and it is carried on along the riverside and along the sea coast. Educational facilities to the village population are provided by three primary schools, a middle school and a secondary school. Wells and springs form the main sources of water supply. The village has a branch office of the Canara Bank, a post and telegraph office and two fair price shops. There are three sports clubs viz., Candolim Cricket Club, Candolim Sports Club and Saipeno Sports Club. Besides, three private medical practitioners, a primary health centre, a hospital and a dispensary, cater to the medicinal needs of the village populace. Besides the Fort Aguada, there are the temple of Shantadurga and Ghagreshwar.

Fort of Aguada

The fort of Aguada encloses the whole peninsula at the south-western extremity of the province of Bardez and forms the northern extremity of the Goa bay. Aguada is an insulated and fortified rock and so called from the great plenty of excellent water which is found there. It was erected in 1612, as it appears from an inscription[1] in Portuguese on its main gate. The statue of a freedom fighter standing at its entrance, attracts the attention of the visitor. It was erected in memory of the freedom fighters who sacrificed their lives in the cause of freedom from foreign domination. Another statue of a lady is also erected in standing posture depicting liberty from the bondage of a slavery.

The fort's circumvallation skirts the seashore, and ascends the summit of the bare and rocky headland called the Aguada point, which is 260 feet

[1] Fonseca, *op. cit.*, p. 40.

above the sea level. On this point stands a castle or citadel with a lighthouse in the form of a circular tower about 36 1/2 feet in diameter and 42 feet in height, which exhibits a light revolving once in seven seconds, and supports a huge clock with a bell, the largest in Goa, once belonging to the Convent of St. Augustine. In 1841, the Governor Lopes de Lima replaced the old type fixed oil lamp by a rotating lantern which in turn was replaced during the Government of Count of Torres Novas by an Argand Lamp of the Catoptric type functioning throughout the year. The present lighting apparatus installed in 1866 can be seen from a distance of 25 miles. Contiguous to this lighthouse are a flagstaff and semaphore. Within the citadel lies a large square cistern measuring 115 feet across and is divided into five compartments by 16 columns supporting its vault. This fort has two powder rooms, two magazines, two prisons, four barracks, a chapel dedicated to Our Lady of Good Voyage, and several buildings for the residence of the commandant, a chaplain, the surgeon and other officers. At present no traces remain of the buildings erected by then Bombay Government in 1808, when British troops occupied the fort. Within its precincts are also seen several fountains and wells, which have from olden times been supplying the ships with water in consequence of which circumstance the spot has derived its name of Aguada or watering place from Agua, 'Water'. One of these fountains was cut out of a rock in 1624 during the administration of Dom Francisco da Gama, grandson of Vasco da Gama as seen from an, inscription[1] over it. This fort once contained 79 guns and was defended by a guard with four officers.

As a prison for fighters during the long drawn out struggle for the Liberation of Goa, the fort of Aguada had among its inmates, many prominent nationalist leaders from within and without, who participated in the Liberation movement. A hallowed place in the history of Liberated Goa, the fort has, therefore, been the scene of flag hoisting ceremonies every year on June 18, the day the struggle began. The fort has completely changed its face and is utilised as the Central Civil Jail where a number of prisoners are housed. With a well laid out garden, an orchard and kitchen garden, the place wears a new look and is humming with activity with classes in tailoring, carpentry, rope weaving, etc. which keep the jail inmates occupied during the day.

CANDOLA

Candola (Khandole) (15° 31′ 00″ North Latitude and 73° 58′ 45″ East Longitude) is an agricultural village with a population of 1,881 as per the Census of 1971. Situated 18 kilometres to the north of Ponda, the headquarters of the taluka bearing the same name in which it is located,

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[1] Fonseca, *op. cit.*, p. 41 ; Telles, R. M., *Praca da Aguada*, in *O Oriente Portugues* Nos. 19-21 of 1938, p. 282.

it consists of six hamlets. Paddy is the main crop grown in the village and *nachani* is a secondary crop. It occupies an area of 478.1 hectares as per the Census of 1971 and is connected to the neighbouring villages by *kuchha* and *pucca* roads. Educational facilities are provided by five primary schools run by the Government. Drinking water is obtained from wells and ponds which also provide irrigation facilities. People avail the advantage of the weekly market held at Banastarim every Friday.

Ganapati temple

The temple dedicated to Ganapati is reported to be of great antiquity which can be judged from the massivity of its architecture and the style of construction. The pinnacle (shikkar) of the temple depicts the shape of Kadamba-Chalukya architecture. The vestibule contains an idol of Lord Ganapati of polished black stone set on a pedestal in the midst of the wooden canopy, which bears some remarkable carving.[1] The present image of Ganapti was brought from Jaipur and the consecration of the deity took place in the year 1968 at the auspicious hands of Shrimat Satchidananda Saraswati Swamijee of Shri Kaivalaya (Queula) *Math.*

Attached to the temple is a spacious *sabhamandap* which is a good specimen of modern architecture. The inauguration of the *mandap* took place on 18th April, 1973, at the auspicious hands of Shrimat Vidyadhiraj Teertha Swamiji of Gokarn Partgali Jeevottam *Math.*

A number of festivals are observed throughout the year. Of these, Ganesh-Navaratra is the main festival celebrated on *Magha Shuddha Chaturthi.*

Bhagavati Temple

The temple dedicated to Bhagavati is reported to be about 450 years old. The deity is said to have originally been located at Aldona in the Bardez Taluka. It was subsequently shifted to Maem in the Bicholim Taluka and then to the present site during the days of religious persecution by the Portuguese. A pillar is still seen at Maem which is known as *Bhagavati Khamb* where a temple is said to have been in existence. The former temple at Candola was a small structure which was renovated in 1817. The inner chamber of the temple contains an idol of Goddess Bhagavati in black stone in the form of *Mahishasurmardini.*

CARAMBOLIM-BRAMA

Carambolim Brama (Brahmyachi Karmali) at 15°34′15″ North Latitude and 74°10′00″ East Longitude, a thinly populated village in the Satari taluka, lies at a distance of about seven kilometres to the north of Valpoi, the headquarters of the taluka and the nearest town. It is reported that the place was formerly known as Chandiwade. The name of the village

[1] Gune, *op. cit.*, p. 20 ; Naik *op. cit.*, p. 42.

was changed into Carambolim Brama when the idol of God Brahmadeva was brought here from Carambolim near Old Goa. Agriculture is the main occupation of the villagers and paddy is the principal crop grown in the village. Coconut, betelnut and *nachani* (pulse) are also grown in the village. Springs and wells form the main sources of water supply to the village populace. It has a Government primary school, two associations *viz*. *Brahmadeva Yuvaka Sangh* and *Kishor Kala Pathaka* which engage themselves in various cultural activities. People avail of the advantage of the weekly bazaar held at Valpoi every Tuesday.

Brahmadeva Temple

The temple of Brahmadeva faces the east and a stream flowing to the left adds beauty to the temple. The God Brahma is looked upon as the progenitor of the Universe and placed first in *puranic triad* (Trimurti : Brahma, Vishnu and Mahesh). The concept of Brahma, seems however, to be older than either Vishnu or Mahesh as its origin can be traced to the word *brahman* in the *Vedas* denoting *mantra* or hymn. In the *Upanishads* this word came to mean the Supreme Being, and later changed into masculine from neuter gender. The idol of Brahma in the temple, is a specimen of good art as it is carved in stone, together with *prabhawal* or surrounding frame. The idol in standing posture, has four heads facing, east, west, south and north. The *prabhawal* depicts the figures of *Hansa* or goose, females, etc.

Brahmotsava is celebrated at the temple in the month of May every year. A fair is held on *Margashirsha Vadya* 4, which marks the anniversary of the establishment of the deity.

COLVA

The village of Colva (Kolve) at 15°17′00″ North Latitude and 73°55′15″ East Longitude is renowned throughout Goa for the miraculous image of the Infant Jesus which is venerated in the church and for its beach which forms the focal point of tourists visiting Goa. It has a population of 1,901 as per the Census of 1971 and is located at a distance of seven kilometres from Margao. Colva can be reached by bus from Margao within ten minutes. Agriculture is the main occupation of the villagers rice and fish being the staple food. The village is noted for its fish. Wells and taps form the main source of water supply. It has a Government primary school and a high school which conduct classes upto S.S.C. in English medium and which provide educational facilities to the village population. It has a branch post office, a branch office of the Baroda Bank, a dispensary and a sports club, *viz*. Clube Mocidade Desportivo Social de Colva, Sporting Club de Colva and Bluebirds Sports Club.

Church of Our Lady of Merces

The parish church dedicated to our Lady of Merces is located just off the Margao/Colva road and is huge and attractive in appearance. The foundation stone of the church was laid in 1581. Though the Church is dedicated to Our Lady of Merces, the traditional feast is that of Menino Jesus or Infant Jesus, an image venerated on the altar to the left. This miraculous image is said to have been found by a Jesuit priest, Fr. Bento Ferreira, on the coast of Africa where he was cast away by a shipwreck. The priest who was on his way to Goa, brought the image to the present site where it is believed to have worked numerous miracles. In October, the '*fama*' or the feast of the image is a noteable event in Goa and people from far and wide flock to the church partly to pay homage to the Redeemer and partly to enjoy the fair. Besides this, a feast in honour of Our Lady of Merces is celebrated in the month of May, with great rejoicings.

Colva Beach

Colva beach is famous for its enchanting loveliness. There is an excellent tarred road linking the town of Margao to the village which winds across wooden country side until it debouches on the sands of the beach. The beach lies in the middle of an immense seashore that extends right from the mouth of the Sal river in the south to the Cansaulim Bay in the north. Its flour-like white sand is at once a matter of wonder to the visiting tourists. It recalls the famous Copacabana beach in Brazil, and is frequented by thousands of holiday makers the year round. The off-shore sea is splendid for swimming. Palm trees add beauty to the shore and the beach is considered to be the rival of Calangute and the pride of the people of Salcete. The beach is being converted into a major holiday resort. The high billows of the Arabian sea and the glittering white sands extending far into the village and studded here and there with palms and dunes make up a fine coastal scenery.

CORGAO

Lying at a distance of nine kilometres towards the west of Pernem, the headquarters of the taluka bearing the same name in which it is located, Corgao (Korgaon) is a village with a population of 4,924 as per the Census of 1971. The village at 15°42'30" North Latitude and 73°06'30" East Longitude is composed of twelve hamlets and occupies an area of 2,138.2 hectares. Agriculture and toddy-tapping are the main occupations of the villagers and rice is the staple food. Water supply is obtained from wells as well as from tanks. Educational facilities to the village students are provided by nine primary schools, a middle school and two secondary schools. People avail the benefit of the Rural Health Centre at Arambol located at a distance of five kilometres approximately. There are two

co-operative societies and two fair price shops. The village has a library maintained by the *Gram Panchayat* and a branch post office. The village youth conduct sports activities through a Club *viz*. Corgao Youth Club.

Kamleshwar Temple

The temple dedicated to Mahadeva and known as Kamleshwar is said to have been constructed around the 8th century[1] by two unknown *Gosawis* or ascetics. It is a spacious structure and can be reached after crossing *mahadvara* or gateway surmounted with a *nagarkhana* or drum chamber. Surrounding the main temple can be seen ancilliary deities and at a short distance is a spacious tank admeasuring around 20 × 20 metres. The principal festivals observed at the temple are that of *Tripuri-Paurnima* on *Kartika Shuddha Paurnima* and a *Jatrotsava* on *Kartika Vadhya Panchami*, when a number of persons gather at the temple.

FATORPA

Fatorpa (Fatorpe) with 2,005 inhabitants as per the Census of 1971, lies 16 kilometres to the south by south-west of Quepem, the nearest town and the headquarters of the taluka bearing the same name in which it is located. It lies at 15° 08′ 30″ North Latitude and 73° 59′ 45″ East Longitude. A reference to the place Bali-Fatorpa is traced in a stone inscription in Nagari script which was carved out during the regime of the Kadambas of Goa. It refers to Kadamba Kula in Nagari characters of 13th century.[2] Paddy is the principal crop grown in the village, rice being the staple food. Wells and streams form the main sources of water supply. Educational facilities are provided by four primary schools and a middle school.

Shantadurga Temple

Fatorpa is renowned for the temple dedicated to Shantadurga, also known as Goddess of Fatorpa throughout Goa. The original place of the deity was at Cuncolim and hence she is known as Shantadurga-Kunkallikarin. A reference to the original temple at Cuncolim is available in the letter dated April 6, 1567, of the then Captain Diogo Rodrigues Fernandes of Rachol Fort from which it seems that the temple of Shantadurga was burnt on April 5, 1567.[3] On the same site a Church was erected later on.

The idol in the *garbhagriha* is made of five metals and is one foot in height. The deity is known as *Jagrit-devata*[4] in Goa. The idol holds in

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1 The temple seems to be ancient as the lands owned by the *Devasthan* bears the same name of the Goa Kamleshwar.

2 Surveyed during 1965 by Government Epigraphist, Ootacamundd—G.S. Gai.

3 Wicki, *Documento Indica*, VII, p. 394 ; Francisco Paes, *Tombo das Rendas de Salcete Bardes e Ilha de Goa, ed.* by Passurlencar in BIVG No. 62, pp. 169-177.

4 The idol in full enjoyment and exercise of its divinity is known as '*Jagrit-daivat*' or '*Jagrit-devata*'.

its arms a shield and a *trishula* or a trident. In the *garbhagriha* itself is also seen a huge idol of Khanderaya which is about four feet in height. Shantadurga-Kunkallikarin is worshipped by Hindus and Christians alike as the devotees believe that She asks in their dreams, anything She likes. It is reported that the Goddess demands a variety of things including clothes, new or old, from her devotees and they offer the things demanded by the Goddess, with great veneration. Hence the temple has much religious sanctity. The things thus offered to the Goddess are auctioned at the time of the festivals and the income derived by this means is deposited in the funds of the *Samsthan*.

The principal festival celebrated at the temple in *Jatrotsava* which commences from *Paush Shukla Panchami* to *Dashami*. During the occasion a number of programmes are held at the temple and a large number of stalls are put up temporarily in the vicinity of the temple and sell a variety of goods. Besides, *Shigmo* is celebrated on *Phalgum Vadya Pratipada* to *Panchami*. During the occasion, dramas are performed.

Shantadurga (Fatarpekarin) Temple

Another attraction of the village is the temple dedicated to Goddess Shantadurga-Fatarpekarin which is located at a short distance from the temple of Shantadurga-Kunkallikarin. She is venerated as *gramadevi* in Fatorpa.

LATAMBARCEM

Latambarcem, a village at 15° 38′ 45″ North Latitude and 73° 56′ 33″ East Longitude and at a distance of twelve kilometers to the East of Bicholim, the headquarters of the taluka bearing the same name in which it is located, has a population of 3,981 according to the Census of 1971. It consists of six hamlets and covers an area of 3,652 hectares. Agriculture is the main occupation of the villagers though some of them work as labourers in mines. The important crops grown are paddy, *nachani* and other cereals. Educational facilities to the village populace are provided by four primary schools and two middle schools conducted by the Government. Wells and a river form the main source of water supply and irrigational facilities are also made available to the village. There is a health centre, a post office and a Consumer's Co-operative Society. The people derive the benefit of the Bazar day every Tuesday at Assonora in the Bardez taluka. The village has an iron-ore mine, too.

Kalikadevi temple

Of the objects of interest in the village, by far the most important is an old temple of a rather unusual construction dedicated to Kalikadevi. It is located in the hamlet Cansarpale, at a distance of three miles from Assonora and about thirty kilometres to the

south-east of Panaji. It is surrounded by small valleys full of green vegetation. The temple belongs to the caste called Cansar, who are copper-smiths and manufacturers of brass utensils.

The temple is a massive structure divided into two outer halls and an inner shrine. The inner shrine is crowned with a dome surmounted with a pinnacle or *shikhar*. The Goddess Kalikadevi, whose four armed imposing idol stands in the middle of the sanctum, looks life-like. She is referred to in an inscription of the 14th century A.D. The Goddess is decorated with a number of ornaments, and a *Kirita* (diadem) embedded with precious jewels. *Agrashalas* surrounding the temple provide, facilities for lodging to the visitors. The annual income of the temple is estimated around Rs. 13,000·00.

Festivals of *Kalo Dassara*, *Vanabhojan*, etc. are observed in the temple. *Shigmo* is considered as the most important festival celebrated enthusiastically.

LOLIEM

Loliem (Lolye), 14°56′00″ North Latitude and 74°04′30″ East Longitude, is a village lying about 17 kilometres to the south of Canacona the headquarters of the taluka bearing the same name, in which it is located. It has a population of 4,278 according to the Census of 1971. To reach Loliem, one has to travel by the bus that plies between Margao and Sadashivgad. The soil in the village is fertile producing rich crops such as paddy, coconut, betelnut and cashewnut. Agriculture and fishing form the main occupations of the villagers although some people are engaged in carpentry work on a small-scale. Loliem, has good educational facilities provided by twelve primary schools conducted by the Government, four middle schools and two high schools. Both the high schools conduct classes upto S.S.C. level with Marathi as a medium of instruction. Drinking water is obtained from the wells and river water is used for irrigational purposes. The village has a health centre, a family planning centre, a maternity and child welfare centre and two dispensaries. A branch post office and two fair price shops serve the village populace. The village youth conducts the sports activities through the Young Boys Sporting Club, Janata Sports Club and Mashe Cricket Club. There is a library *viz.*, the Janata Vachanalya.

The temples dedicated to Nirakar, Aryadurga, Keshāva and Damodar are worth visiting.

MAPUSA

Lying on 15°35′30″ North Latitude and 73°48′45″ East Longitude, at the base of a laterite plateau and steadily sprawling over the plateau slope and the top, is the municipal town of Mapusa ((Mhapse). It is a route and commercial centre of North Goa and has a population of 20,001

as per the Census of 1971. Situated on the National Highway and about thirteen kilometres to the north of Panaji, this is the first important town that one comes across while entering Goa from Maharashtra. From Mapusa several routes branch off west and east of which the road to Bicholim is important. The older part of the town has a linear plan adhering close to the hill base. Expansion has not only taken place along the base but also through the low gap which carries the National Highway. More recently educational institutions, built on the plateau have added strength to Mapusa's urban life and the new market complex built during the Portuguese rule and wide parking area for the large number of taxis indicate Mapusa's links with the rural surroundings for which it acts as a market centre. It is the headquaters of the Bardez taluka. Bounded on the East by the river of the same name, which is a branch of the Mandovi river, and occupying almost the central position in the Bardez taluka, Mapusa has since olden times been considered as an important economic and commercial centre in the district of Goa. Perhaps the etymology of the name of the town itself throws some light on the commercial tradition of the place. According to one tradition Mapusa takes its name from *Map* i.e. measure and *sa* i.e. to fill up, meaning in its entirety, place of measure or selling goods. The roads leading to Mapusa from Parra and Guirim in the Bardez taluka are studded with palm-groves on either side and present a pleasant sight. Mapusa is located at an altitude of 44 metres and gets and average rainfall of 3,819·3 mm. The climate is temperate, the maximum and minimum temperatures being 31·4°C and 23·7°C, respectively. Margao is the nearest railway station and is located at a distance of 45 kilometres from Mapusa. Chapora river provides navigational facilities to Mapusa at Chapora about nine kilometres from Mapusa. Mormugao is the nearest port at a distance of 44 kilometres.

Mapusa gets protected water supply through taps. Night soil is carried away by open surface drainage. The town has also been provided with a fire-fighting service. Medical facilities to the town population are provided by one Health Centre, a T.B. Centre and the Asilo Hospital, besides a number of private dispensaries and nursing homes. Four primary schools, eleven secondary and higher secondary schools, and St. Xavier's College of Arts and Science affiliated to the University of Bombay, cater to the educational needs of the town populace. Besides, there are three shorthand and typewriting institutions.

The total length of roads in the town is 3·7 kilometres of which 2·7 kilometres are *pucca* roads. The Bombay-Konkan-Goa National Highway runs through the town.

Entertainment facilities to the town populace are provided by two cinema theatres. Besides, there are two auditoria-*cum*-dramas halls. There are also two public libraries. There are eight sports clubs in the

town, the names of which are Mapusa Youth Club, Nutan Sporting Club, Mapusa Junior's Association Club, Jolly Club, Mapusa Boys' Sports Club, Carmelite Sporting Club, Cat Bows Club and Morod Youth Sports Club.

Mapusa is an important trading centre, the commodities imported being rice, wheat and sugar and the commodities exported being coconut, cashew-nut and coconut oil. The well constructed modern market near the bus-stand also serves as a place of weekly market which is held every Friday when vendors, from the adjoining talukas of Satari, Pernem and Bicholim carry on brisk business, the principal commodities sold being vegetables, fruits, dry fish, etc. It is a manufacturing centre for soap, tiles and pottery. Branches of seven banks are located at Mapusa. There are seven non-agricultural credit societies also.

Bodgeshwar Temple

The small shirine dedicated to Kanakeshwar Baba also known as Bodgeshwar and popularly known as *Bongini*, who is considered to be the God for *angavani* i.e. to whom vows are made, is situated in the midst of greenery. The devotees of the deity believe that he is capable of fulfilling their desires. The people therefore make vows to him for various petitions like the gift of a child, employment, relief from physical and mental ailments, etc. On the fulfilment of their desires, the devotees offer the God presents as promised by them earlier. The fair in honour of the deity is held every year in the month of December/January, when more than six thousand flock to grace the occasion. It is considered as one of the biggest fairs in Goa.

Our Lady of Miracles Church

The church dedicated to Our Lady of Miracles was built in 1594 and was rebuilt in 1719. Being destroyed by fire in 1838, it was constructed anew immediately. Over the main altar is seen the image of Nossa Senhora de Milagres, held in great veneration not only by Christians, but also by Hindus. Hindus consider Nossa Senhora de Milagres as a sister of Lairai at Sirigaon. She is considered as a Goddess that cures ailments and usually ailing persons would say, 'Milagre Saibini pao' meaning thereby, 'Our Lady of Miracles, come to my rescue'. The feast of Nossa Senhora de Milagres is solemnized on the second Monday after Easter when more than six thousand persons assemble.

MARCAIM

Situated at 15°25′ 15″ North Latitude and 73°56′ 45″ East Longitude on the bank of the River Zuari, nine kilometres to the east of Ponda, the headquarters of the taluka bearing the same name in which it is located,

Marcaim (Madkai) is a village with 5,224 inhabitants as per the Census of 1971. The village covers an area of 1,045.9 hectares and wells and rivers from its main sources of water supply. Educational facilities to the village population are provided by seven primary schools and a secondary school. A health centre and a family planning centre provide preventive and curative health measures. It has a consumer's and a dairy co-operative society. An organisation of youth, named Marcaim Yuvak Sangha, engages itself in the uplift of the masses in the village and conducts cultural activities. The village has a post office too. It is connected with Ponda by a motorable tar road and a regular bus service plies between Marcaim and Ponda. There are three sports clubs in the village *viz.* Vinod Sports Club, Mahalwada Sporting Club and Swami Vivekananda Sports Club.

Navadurga Temple

The temple dedicated to the Goddess Navadurga is said to be about 500 years old and was renovated in Saka era 1525 i.e. 1603 A.D. Originally located at Ganvshi a village in the Tiswadi taluka, the diety was shifted to *Tali-khol*, a locality in *Parampai-Vaddo* of the village of Marcaim. It was subsequently shifted and kept in a room near the present temple. After the construction of the temple, the diety was consecrated and installed in it with all religious rituals.

In the centre of the *garbhagriha* of the temple is a stone idol of the Goddess placed on a raised platform. The height of the idol, in standing posture, is about four feet and her peculiarity lies in her pose, that is her neck is slightly bent to the left and she is in the form of *Mahishasurmardini*.[1] She is considered as a fierce form of *Devi* and is worshipped in Goa with great veneration.

The fair considered to be a religious gathering in which the residents of the village as also of the neighbouring villages participate in large numbers, is held once a year from *Kartika Vadya* 4 to 10, when about 5,000 to 8,000 people assemble. Many stalls selling utensils, sweetmeats, toys, etc. and restaurants are opened during the fair.

MARCELA

Marcela (Mashel) (15°31′ 00″ North Latitude and 73°57′ 20″ East Longitude) lies at a distance of sixteen kilometres to the east of Ponda, the headquarters of the taluka bearing the same name. The village has a population of 3,072 as per the Census of 1971 and comes under the *panchayat* jurisdiction of Tivrem/Orgao. It has six Government primary schools and a secondary school. Wells form the main source of water supply. A large number of the villagers are directly dependent on

[1] Gune, *op. cit.*, pp. 19, 20.

agriculture for their livelihood. Medical facilities are provided to the residents of Marcela by four private medical practitioners, besides a Government health sub-centre. There is a consumers' and a dairy co-operative society. The village is adequately served by a branch post office and a branch office of the Canara Bank. There are two sports clubs *viz*. Union Sports Club and Marcela Sports Club. There is a small ice factory too. A cinema house entertains the people. The people of the village avail the advantage of bazar day held every Friday at Banastarim, a neighbouring village.

Devaki-Krishna Temple

The noteworthy temple dedicated to Devaki-Krishna is located at a walking distance of about 100 yards from the main road. The deity is said to have been brought from Chorao in the Tiswadi taluka to Maem in the Bicholim taluka and then shifted to the present place during the days of the religious persecution by the Portuguese. The temple is enclosed by a compound and is a stone structure having no pretensions to much architectural beauty. The *garbhagriha* contains the beautiful idol of Devaki and Krishna. The idol of Devaki is in a standing posture with a child, Krishna, sitting astride her hip. This particular pose of the idol is considered to be unique in Goa. The idols are beautifully carved in black stone.

The major festivals celebrated at the temple are that of '*Malini Paurnima*' from *Paush Vadya* 1 to 5, *jatra* on Margashirsha Shuddha 13, and 'Shigmo' in the month of *Phalgun* and *Sharada Navaratra*.

MARGAO

Margao (Madgaon), is located at 15°16′ 30″ North Latitude and 75°57′ 30″ East Longitude and has a population of 41,655 as per the Census of 1971. Situated at the base of a lateritic tableland, Margao is the natural centre of the middle region of the district. It lies about 30 kilometres to the south by sout-east of Panaji and is situated in the heart of the Salcete taluka. Margao is the biggest commercial centre of the whole of Goa and is linked by rail to Vasco da Gama and the Mormugao harbour on one side and Poona *via* Londa and Belgaum on the other side. Its railway station is an intermediate terminus of great significance and heavy passenger and freight movement takes place through it. It is a municipal town and is situated at an altitude of 20 metres and receives an annual rainfall of 2,611·7 mm. The average maximum and minimum temperatures at Margao are 34·3°C and 18·3°C respectively. River navigational facilities are also provided to the town by the river Sal at a distance of about two kilometres.

Margao was associated with Parasurama's legend and during the Hindu and Mohammedan rule, appears to have been considered to be a place

of great importance. At the time of the Portuguese conquest it was in a flourishing condition and contained many well-constructed buildings, the most remarkable of which were the Hindu temples. In the town were the temples dedicated to Damdor (Damodara), Chadenato (Chandranath), Narainna-Puturday (Naraenna Paturdeu), Chamdeusery (Choundeshwari or Chamundeshwari), Santeri, Macazan (Macagi), Mayasassor (Maixassur Mardini or Maheshwar), Vira (Mull Vir), Bagonte (Bhagavati) Gomespor (Goveshwar), Malcumi (Mahalaxmi), Bhut (Bhutnath), Narainna, Ispor (Iswar) and Gram-Purush. Of these the Portuguese destroyed nothing less than ten pagodas (temples).

According to the Hindu tradition, Margao was one of the early seats of Aryan settlers of Goa and the site of the chief *math* or convent, whence its name *mathagrama* or the village of convents seems to have been originated. Margao is a pretty town. Though the busiest and most populous villa of Goa, it is worth a visit. It was raised to the rank of town by a royal decree of the 3rd April 1778 and is even now thickly populated comprising Hindus, Christians and Muslims who have lived in peace and harmony through the centuries. Christianity was introduced into Margao by the Jesuits by about 1567, and a Church was erected on the ruins of the Chief Pagoda as directed by the Archbishop Dom Gaspar de Leao Pereira.

The town is surrounded by the populous villages of Velim, Curtorim, Raia, Rachol, Chinchinim, etc. and interlinked by good motorable roads. For tourists coming to Margao by different routes, it is practically a terminus of their journey. All round the town there are extensive paddy fields and wooden hillocks providing an idyllic backdrop to the urban areas. The climate is good and specially on the outskirts it is very cool and pleasant as there are extensive coconut groves and orchards.

The construction of the railway endowed the town with the advantage of nodality of rail and road links. It is the market for the rich agricultural interior collecting principally, rice and coconut and distributing processed consumer goods to the surrounding villages. There are two markets in the town of which one is called Mercado Vasco da Gama or old market and the second is known as Mercado Afonso de Albuquerque built later on. The new market is built on modern lines and it is the hub of great commercial activity of people not only from the town but also from the nearby villages and other talukas who flock there to purchase their daily requirements like food, apparel and sundry articles. The old market is old fashioned and shopping activity there is restricted. The principal commodities imported are wheat, sugar and kerosene and those exported are cashewnut, betel nut and canned fruits. Margao is the principal centre for manufacturing soap, country liquor and for canning of fish.

The town took a very active part in the Liberation movement. This is the place where the first *satyagraha* for the Liberation of Goa, under the leadership of Dr. Ram Manohar Lohia, had taken place. Since Liberation, banks have flourished and a number of hotels, restaurants, etc. have sprung up. There is also one agricultural credit society and eighteen non-agricultural credit societies.

There are a large number of hotels, restaurants and lodging and boarding houses. Besides, there are a large number of bars and taverns, etc. There are a number of fine buildings and private bungalows. Typical Goan houses are seen in the town.

Margao gets a protected water supply through pipelines. The night soil is carried away by open surface drainage with septic tank latrines

Educational Institutions

Twenty-three primary schools, two middle schools, thirteen high schools and the Chowgule College of Arts and Science affiliated to the University of Bombay located at Vidhya nagar, cater to the educational needs of the town population. An Arts and Science College *viz.* Carmel College, situated at Nuvem village also caters to collegiate education for girls. Besides, there are seven shorthand and typewriting institutions.

The town is considered to be the cultural centre of Goa. The Matha Gramastha Hindu Sabha, the Gomant Vidya Niketan, the Rotary, the Lions and the Jaycee Clubs of Margao, Club of Amadores, Cricket Club and the Mahila Mandal play a vital role in moulding the public life of the town.

Medical Institutions

Medical facilities to the town population are provided by one hospital *viz.* Hospicio Sacred Heart in which major operations are carried out and medical aid is given to the general public, two health centres, fifteen dispensaries, one T. B. clinic, one family planning centre and eight nursing homes with a total bed strength of about 350, besides private medical practitioners.

Libraries

A number of persons take advantage of the library facilities available in the town. The main ones are the Municipal library and the Gomantaka Vidya Niketan Library both well equipped with books, magazines and other publications.

Entertainment

Three cinema houses *viz.* Cine Lata, Metropole and Vishant, which show both western and national movies daily, cater to the recreational needs of the town population. Besides, there are five auditoria-*cum*-drama

halls and a stadium. The town has four main squares, the biggest of which is the "*Praca Jorge Baretto*" later converted into a fine garden. The garden in the heart of the town is spacious and well planned. It attracts a large number of people. Every evening recorded music is played over loudspeekers in the garden. Ample sitting arrangements are made in the garden for the visiting public. Sports clubs functioning in the town are Margao Cricket Club, Clube Desportivo Bernardo Peres de Silva, Crescente Sporting Club, Clube Desportivo Indepenent de Margao, Timblo Sports Club, Shantilal Sports Club, Margao Social Club Maddel, Margao Yuvak Sports Club, Club Amadares de Borda, Borda Margao and Clube Desportivo Azes de Borda.

Margao is the tourist spot of southern Goa and a number of splendid beaches lie close by, the biggest being Colva beach, one of the loveliest beaches in Goa. The town has an impressive church called the Church of the Holy Spirit. There are also a number of other objects of interest in the town *viz.* Hari Mandir, Damodar Temple and Vitthal Mandir. There are a few noteworthy monuments, like the one dedicated to Fr. Jose Vaz in the square near the church and another dedicated to Fr. Antonio Joao Miranda in the garden of the hospital of the Sacred Heart. Near the market is a huge pipal tree which local people revere as a place of God Damodar.

Church of the Holy Spirit

The church dedicated to the Holy Spirit has an impressive architecture. After the introduction of Christianity in Margao by the Jesuit Fathers about the year 1564, the Church was erected in 1565 on the ruins of a Hindu temple consecrated to the memory of God Macaji[1]. Image *Chaturmukha Shiva* was found in 1967 while constructing the building of the Convent near the Church. It is kept in the State Museum at Panaji. Before the erection of the church, the idol of Damodar had already been shifted to Zambaulim (Rivona). This church which was burnt by the Muslims during the Government of Dom Luiz de Athaide, was rebuilt in 1589. Having afterwards fallen into decay, it was reconstructed in 1675. The church has ten altars. The main altar is dedicated to the Holy Spirit, the patron of the church, and one of the side altars is dedicated to St. Roque. A fair is held annually with all traditional glory[2].

Hari Mandir

Located by the side of the Margao-Aquem road, near the new bazaar, the Hari Mandir is believed to be about sixty years old. In the midst

[1] Francisco Paos, *op.cit.*; Pissurlencar in BIVG Vol. 62, notes p. 46; *Oriente Conquistado* II parte, Cap. I, div. 1, 7.

[2] *Anuario* 1955, *op cit.*, p. 117.

of the *mandir* are placed the holy books (*Pothi*) of saint Jyaneshwar and Santhagatha. The shrine also contains silver images of Vitthal and Rakhumayi on a raised pedestal. On *Kartika Shuddha* 13, '*Dindi*' festival is held with all traditional glory. A procession attended by thousands of people from all parts of Goa, is taken out from the temple to Vitthal Mandir and it is a noteable event. The programmes of *bhajan* are the items of attraction on the occasion.

Damodar Temple

The beautiful shrine dedicated to Damodar is located by the side of the road. It is said that the original deity in the form of *Kalasha* was worshipped formerly at Zambaulim in Quepem. It was brought to Margao when a severe epidemic hit Zambaulim in the year 1884. In 1896, the *Kalasha* was taken back to Zambaulim and later on it was shifted to Margao once again. Then a Shrine was constructed in the year 1910 and the deity was consecrated in it with all religious rituals. Records of the shrine say that Swami Vivekananda paid a visit there in 1892.

On every Monday in the month of *Shravan* a huge gathering assembles here to pay homage to the deity, and *bhajans* (devotional songs) are sung when a number of devotees assemble at the temple.

Vitthal Mandir

The temple dedicated to Vitthal is said to have been constructed about 60 years ago. It is a beautiful construction with a *garbhagriha* which contains the idols of Vitthal and Rakhumayi carved out in black stone. On the occasion of 'Dindi' a large number of people gather here.

NAROA

Naroa lying at 15° 33'00" North Latitude and 73° 56' 00" East Longitude is a village located at a distance of about five kilometres to the south of Bicholim, the headquarters of the taluka bearing the same name. It consists of five hamlets covering an area of 715.6 hectares, and a population of 1,594 as per the Census of 1971. It is the most southerly point of the taluka and is situated opposite the village of the same name in the island of Divar or the ancient Divapati. Paddy is the main crop grown in the village, the secondary crops being coconut, arecanut, *nachani*, etc. Drinking water is obtained by the villagers from the wells. Educational facilities to the village population are provided by two primary schools conducted by the Government.

Saptakoteshwar Temple

The temple dedicated to Saptakoteshwar is regarded to be the oldest temple in Goa and has an appearance of a traditionally built structure. The temple has an historical background. Formerly situated in the locality of the same name near the islet of Divar, the temple was exposed to many

vicissitudes of the Portuguese. The Kadamba kings were proud enough to use their title or *birudu* i.e. *Shri Saptakotesh labdha varavira*, as Saptakoteshwar was the favoured deity of their dynasty. Historically, the origin of Saptakoteshwar can be related to the story of folk-God of Karnataka and Maharashtra, Khandoba, whose main pilgrim centre is located at Jejuri in the Pune district, of the Maharashtra State. The worship of Martanda-Bhairava in the form of Ravalnath seems to be quite popular in Goa from ancient times as his images are worshipped practically in most of the temples in Goa as an associated deity. It is possible that the Goa Kadambas might have patronised his worship in the form of Saptakoteshwar of Narve by adopting Saptakoteshwar as the deity of their royal family, from the time of Shivachitta Kadamba (1155 A.D.). His wife Kamaladevi used to worship Saptakoteshwar with great veneration. The name of the God was often inscribed on the Kadamba coins.[1]

Due to the religious persecution of the Bahamani kings during 1355--66 A.D., the *linga* of Saptakoteshwar was kept hidden in the fields by his devotees. The great vedic scholar, politician and Minister, Madhava of Vijayanagar kingdom established the *linga* in 1391 A.D.[2] The temple was destroyed by the Portuguese and on the ancient site of the temple of Naroa in the Divadi island, a chapel dedicated to Nossa Senhora Candelaria was erected in 1563. The ancient temple was well known for its art and architecture. Some remains of the ancient temple are still noticed in the chapel.[3]

Many years afterwards, Chhatrapati Shivaji found the temple of Saptakoteshwar in a ruinous condition and gave his attention to the reconstruction of the temple at the present site. Evidence of his admiration of this ancient shrine is perpetuated in a Sanskrit Nagari inscription which is noticed on the top of the doorway of the temple issued by *Maratha Shivaraja* in *Sake* 1590 *Kartikabahul* 5 Monday—13th Novem 1668 and it records the commencement of the construction of the temple by the king on the given date. The inscription reads, "In the cyclic year *Kilaka* on the fifth day of the dark fortnight of the month of Kartika in the *sake* 1590 the works of the temple began by virtue of the order of Shri Shiva.[4]

The temple is divided into four parts. The spacious sabhamandap is supported by five huge stone pillars, square in shape, on both sides. It has a white marble flooring. The square *garbhagriha*, though small, is

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[1] Dikshit *Kadamba Gold coins* JNS, X p. 45 ff; Khare, *Kadamba Coins* JNS XXVII p. 62, etc.

[2] Sardesai, J.V.S., *Shri Saptakoteshwara Devasthanachu Itihas*, Bicholim-Goa, 1934.

[3] Francisco Paes, *op. cit.*; notes by Pissurlencar in B.I.V.G. No. 62 p. 142; JBHS IV. 2, p. 24-26.

[4] Gune, *op. cit.*, pg. 14 and plate 30; *Shri Shivarajyabhisheka Kalputaru* a.J; BISM. No. 10·1, p. 30.

elegant as it is carved off a single block of stone. Above the *garbhagriha* is a dome with a *shikhar*, a typical style of all the Goa temples. In the *garbhagriha* is a *shivalinga* which is venerated as Saptakoteshwar. Various forms of linga are worshipped from the crude uncut conical gneiss usually believed to be self born, to the highly polished and handmade shafts. The *linga* of Saptakoteshwar is believed to be as *dharalinga*[1] and considered to be very sacred. At the left side of the entrance of the *garbhagriha* is a small well and to the right is an underground cell. In the *sabhamandap*, on a marble pedestal is the stone image of *Nandi*, the carrier of Lord Shiva, carved in a black stone in a sitting posture. A *dipastambha* is also erected in front of the temple. There is a sacred tank known as *panchagana* Tirtha in which the devotees take bath during the auspicious occasion of *Gokulashtami*, the birthday of Lord Krishna. *Mahashivratra* is also celebrated at the temple with great splendour when thousands of devotees from all over Goa gather to pay homage to the deity.

OLD GOA

Old Goa (Velha Goa) a small village in the Tiswadi taluka is situated at 15° 30′ 30″ North Latitude and 73° 54′ 30″ East Longitude, about ten kilometres to the east of Panaji. The village is linked to Panaji by a tar road and a regular bus-service plies between the town and the village. It has a population of 533 according to the Census of 1971. Wells form the main source of water supply, though protected tap water is also available to the village. It has a sub-post and telegraph office and a Government primary school. Medical facilities are provided by the Ribandar Hospital. It is located on the banks of the river Gomati, also known as the river Mandovi. Old Goa, known as "Rome of the East" in former times, was a fabulous city where the trade between the East and West met, leaving behind a veritable treasure of art, cult and culture. It is the place where, snuggled amidst coconut groves, are most of Goa's famous churches of international fame such as See Cathedral, Basilica of Bom Jesus, the Church of St. Francis of Assisi, Majestic monasteries and convents by the side of the main Panaji-Margao road. The ancient temple of Gomanteshwar, the Government Agricultural Farm and Poultry Farm is also situated in the village.

To the left of the main road, there is a beautiful garden, amidst which stands the lovely bronze statue of Luis de Camoes, the 16th century national poet of Portugal. His poem, the *Lusiadas*, describes the voyage of Vasco-da-Gama from Portugal to India and back on the model of *Aeneid*. The statue is 3 metres high, with the scroll of his peom in his right hand, and was installed in 1960. A statue of Mahatma Gandhi

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[1] The *lingas* having facets are known as *dharalingas* and those with human faces are called *mukhalingas*.

with a Harijan girl can also be seen at the junction of five roads. The statue is made of bronze, is nine feet high, and depicts Gandhiji walking with a Harijan girl who is carrying a winnowing basket, both looking at each other. He wears chappals and has a stick in the right hand with a pocket watch hanging from his waist. The fourteen feet high pedestal on which these statues are erected, bears inscriptions of some sayings[1] of Gandhiji.

By the middle of the 16th century, the Portuguese maritime empire of India reached its zenith and was extended from Mozambique on the East Coast of Africa to Ternate in South East Asia. Goa became the entrepot of Asian trade from where spices and other goods were sent to western countries in Portuguese homebound ships. It was also a centre for Asian shipping. The Portuguese managed to provide the Indian ports, specially Cambay, with the merchandise the Indians wanted. Besides supplying them with European goods, the Portuguese also imported spices and far Eastern products which the Asian merchants wanted. Portuguese imports and the Portuguese demand for Asian products strongly influenced market conditions in trading towns on the east coast upto Coromandel. When the Portuguese shipments were heavy, prices dropped in Goa, which attracted Asian traders to this Portuguese centre.[2]

The king of Portugal reserved to himself the monopoly of the trade in spices which were transmitted every year to Portugal to the extent of about 30,000 quintals (38,40,000 lbs). The profits accruing thereof have been estimated at about £ 45,000. Other goods were also largely imported yielding a profit of at least 30 per cent or in other words a sum of £ 1,50,000[3].

The population of the city of Goa in the beginning of the 17th century was estimated at 2,25,000, three-fourths being Christians. The population was composed of men of different races.[4] There were according to Linschoten, merchants from Arabia, Armenia, Persia, Cambay, Bengal, Pegu, Siam, Malacca, Java, the Moluccas, China and other eastern countries There were Venetians, Italians, Germans, Flemings, Castilians and Englishmen but scarcely any French. There were also Jews and

[1] Following are the lines inscribed on the pedestal:
It is by my fetters that I can fly;
It is by my sorrows that I can soar;
It is by my reverses that I can run;
It is by my tears that I can travel;
It is by my cross that I can climb into the heart of humanity;
Let me magnify my cross, O God.

[2] Meilink Asian trade p. 185

[3] Fonseca, *op cit.*, p. 24.

[4] *ibid*, p. 155

Muslims.[1] The travellers of the time have described the city in such glowing terms as to justify the appellation of '*Goa dourada*' or 'Golden Goa' With the decline and fall of the Portuguese empire the city lost its importance.

In consequence of a terrible epidemic which then spread in the city of Goa and its suburbs, the Viceregal residence was transferred to Idalcao Palace (present Secretariat) at Panaji in 1759 A.D. In 1843, the city of Panaji was declared as the Capital of Portuguese India.

The ancient glory of the city of old Goa which was once the capital of the Portuguese seaborne empire of India cannot be adequately visualised as most of the important buildings have totally disappeared leaving behind some ancient remains of their existence. The city was protected by a wall of fortification. Enclosed in it among other buildings to the west of the present Chapel of St. Catherine was *Ribeira Grande* (Great Embankment) which was the city workshop and included arsenal, mint and gunfoundry, St. Catherine's quay, Archbishop's prison, *Aljube*, Chapel of St. Martin, College of St. Bonventure and the Royal Hospital. On the right side of St. Catherine's quay was *Ribeira das Gales* where elaborate Galleys of Mediterranean type were constructed. It was also the landing place for shipping from Portugal. Next to it was the Quay of the Viceroys or *Terreiro Grande* which was the centre of the official and commercial life of the Capital city and included the Viceroy's palace known as Fort Palace, Custom House, principal landing place and square of the Palace or *Terreiro do Paco*. To its east was the great market of the city or *Bazar Grande*. To the south of the Bazar was the town of Goa which was approached through the Arch of the Viceroys; suituated at the western end of the Palace. *Rua Direita* or High Street started with the Viceroy's Arch and went through the main thoroughfare of the town for about 2 kilometres. The place of public auction or *O Leilao* was situated on this street.

In the main Cathedral quarter, which now include See Cathedral, Old Palace of Arch-Bishop and Convent and Church of St. Francis Assisi there was the imposing building of Inquisition and to its north the Senate and *Casa dos Contos* or Royal Treasury. Close to the Inquisition were the homes and churches of Laymen's confraternity of *Misericordia*, and the Chapel of Nossa Senhora de Serra, which was built on the ancient entrance gate of the Muslim city.

The road bordering the Bom Jesus was followed by a square, where bazaar was held. Contiguous to it, is the big stone pillar, a relic of the ancient pillory. It was stiuated in the centre of the city which was once notorious for the sale of stolen goods in the night and was known as

[1] Linschoten, *Histoire de la Navigation*, p. 64; Pyrard, *Voyage*, Part II, p. 33; Mandeslo, *Voyages and Travels* p. 86; Fonseca, *op. cit.*, p. 155.

Bartilha. The church of the Miraculous Cross was to the extreme south of the city on the hill *Boa Vista*, which commands a fine panorama. Following the road to Carambolim on the southern extremity of this old city was the Church of Blessed Trinity, which was constructed near the ancient site of the temple of Gomanteshwar.

In the south-eastern corner of the city and on the back side of the existing church of St, Cajetan were situated the College of St. Paul, Church and Convent of St. Dominic, Church and Convent of Carmelites, Church of Nossa Senhora de Monte, Church of St. Lucia, Hospital of Lazarus and Church of St. Thomas. To the south of the Convent of St. Francis Assisi was the *Terreiro dos Gallos* or cockpit square on which stands the buildings of Basilica of Bom Jesus, Chapel of St. Francis Xavier and Professed House of Jesuits. To the west of the Bom Jesus is the Convent of *Sao Joao de Deus*. A road passing towards the west from the square of St. Francis cuts across Holy Hill where the tower of the Church of St. Augustine is seen and in front of it is the Nunnery of St. Monica. In the western extremity of the hill is the Chapel of Our Lady of the Rosary[1].

The Gate of the Fortress of Adil Shah

It is situated on the left side of the Viceroy's Arch. The doorway is constructed of black stone and consists of a horizontal lintel which rests on pillars adorned with mouldings and having on the outer side, fragmentary perforated screens. It stands on a raised platform in front of which there are six steps leading to it. Its architecture is purely Hindu in style and it seems to have been constructed by Sabaji, Hindu rulers of Goa before its conquest by Muslims in 1471[2]. The Fortress was occupied by the Adil Shahi rulers of Bijapur few years before the conquest of Goa by the Portuguese in 1510 and the Portuguese named it as the Palace of fortress of Adil Shah or Adil Khan. The residence of the viceroys was removed to it from the ancient palace by the side of the See Cathedral in 1554[3].

The palace of the Fortress or *Palacio de Fortaleza* continued to be the residence of Portuguese Viceroys and Governors till 1695, when it was shifted to Panelim, due to epidemic and was neglected. According to Cottineau, the governor held in it his solemn audiences of festivities etc. till 1812 and it was pulled down in 1920 and its material was carried to Panaji[4]. The palace faced towards the south and had a large square in front of it known as *Terreiro do Paco* which was surrounded by beautiful houses. According to Pyrard it was very magnificiently built and it stood on an eminence (probably of the ancient fortress) and was the most

[1] Cottineau's *History of Goa*, Bombay, 1910, pp. 52-53.
[2] See Chapter 2-History.
[3] Fonseca, *op. cit.*, p. 211.
[4] Cottineau, *op. cit*, p. 57.

conspicuous building in the city. The halls of the palace were adorned with paintings of ships that had saled to India since the time of Vasco-da-Gama. About 806 vessels had left Portugal for the East till 1612 and the paintings must have been on a large number. In another spacious hall, life-size portraits of all the viceroys and governors were displayed. In front of this Palace stood the High Court, on its side the Chief Jail called *Tronco* and to the left the royal magazines.[1]

The Viceroy's Arch

It is situated at a little distance from the modern jetty at Old Goa which was also the landing place of the old capital city and was its main entrance. It was decorated on the occasion of the entry of every new Viceroy and is called Arch of Viceroys or *Arco dos Vice-reys*. It was built in black stone by the order of the Senate of Goa as a Centennial Memorial to Vasco-da-Gama for his discovery of the sea route to India, under orders of Governor Francisco-da-Gama (1597-1600) who was the grandson of Vasco-da- Gama.

The foundation of the monument was celebrated with great pomp. The famous Portuguese chronicler Diogo do Couto, author of *Decadas da Asia*, participated in it. There is another inscription on its right side dedicated to the vow of Immaculate Conception, dated 1656, commemorating the emancipation of Portugal from Spanish domination.[2] In the niche at the top of the Arch there is a statue of Vasco-da-Gama, on the rear is a statue of Argonaut. The Arch was completely renovated in 1954 retaining the statue of Vasco-da-Gana. The bronze statue of Catherine on the top of the monument in a separate niche was removed from it.

See Cathedral

Not far away from the present Cathedral or See Primacial, there stood a church dedicated to St. Catherine, which was erected approximately towards the end of the year 1510. Subsequently, by a Bull of Pope Paul III, the church was raised to the rank of Cathedral in the year 1534. However, with the passage of time it was decided to build a new Cathedral, the foundation stone of which was laid in the year 1562. The main body was completed, blessed and inaugurated in the year 1619 and the altars in 1652. It remained under construction for nearly three-fourths of a century since 1562. It was built by the Portuguese for the Dominicans from out of the sale proceeds of the property that escheated to the Crown and has witnessed the rise and fall of the Portuguese power.[3]

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[1] Fonseca, *op. cit.*, pp. 95-97.
[2] *Ibid.*, p. 193.
[3] *Ibid.*, p. 201

See Cathedral, the most imposing of all the churches at Old Goa, is a majestic edifice, with its facade facing the east. The Church has three porticos and three naves. On the top of the middle portico is a large slab with an inscription[1] in two columns, with a tiara and keys, the Papal insignia in the middle. It measures about 35.3 metres high on the facade, total length is 76 metres and breadth 54.4 metres. Its external structure is a blend of Tuscan and Doric styles and its internal structure is in the Mosaic-Corinthian style.[2]

The interior of the church is magnificent and has a vaulted ceiling, which overwhelms the visitor by its sheer grandeur, with its exquisite masterpiece of archaic art and architecture. The body of the church is divided by two rows of thick pillars into a nave and two aisles communicating with each other under mosaic-corinthian arcades. At the entrance, are two carrara marble fonts for holy water, inserted in the columns. At the entrance to the Cathedral on the right side, there is the historical octagonal baptismal font made of a single granite block, in which the venerable St. Francis Xavier is said to have baptized innumerable catechumens in 1542, while on the left side can be seen a large canvas representing St. Christopher with the Infant Jesus on his shoulders.

Turning to the right one can see the fourchapels, the first dedicated to St. Anthony, the second to St. Bernard, the third to the Cross of Miracles, and the fourth to the Holy Spirit. The Chapel of the Cross of Miracles deserves attention on account of the cross, which according to the tradition grows slowly in size and had miraculously grown in size in the church of Miraculous Cross before it was located in this Chapel. Its present height is 6.4 metres.

Of the four chapels on the left, the first is dedicated to *Nossa Senhora de Necessidades*, the second to St. Sebastian, the third to the Blessed Sacrament, and the fourth to *Nossa Senhora de Boa Vida*. Of these, the chapel of the Blessed Sacrament is the most spacious and beautiful and has its own vestry ; its altar is elegantly wrought and decorated. The Blessed Sacrament is kept here, while in other churches it is always in the main altar. The chapel is 22 metres long and 6.5 metres broad.

Proceeding further into the interior of the church, one can see the transept, 10 metres by 27.7 metres. It has six altars, three on each side, those to the right dedicated respectively to St. Joseph, *Nossa Senhora das Dores* and St. Peter ; those to the left to *Nossa Senhora de Angustia*,

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[1] Fonseca, *op. cit.*, pp. 202-203. The inscription reads as follows: "In the reign of the very Catholic King Don Sebastiao this Cathedral was ordered to be erected in the year of our Lord 1562, the Archbishops and Primates being the Administrators. The Catholic Kings, his successors, ordered it to be continued at the cost of their Royal Treasury upto the time of the present Archbishop Primate Don Francisco dos Martires, and Viceroy of this State...... ."

[2] *ibid.*, page 203.

St. George and *Nossa Senhora d'Esperanca*. Also to the right of the transept lies the vestry, where one can see various pictures of St. Catherine and of the twelve apostles. The vestments, though very rich and formerly highly spoken of, are now worn out.

The principal chapel, with its high altar, has an imposing appearance, and is 11.5 metres long and 10.6 metres broad. The altar piece is very large, and richly adorned with engravings, pillars, pilasters and other embellishments. It has three niches in the centre, one above the other, in which stand three images, one of St. Catherine, another of *Nossa Senhora d'Assumpcao*, and the third of Christ crucified. Over the last image there is the figure of a dove, symbolizing the Holy Spirit. The base of the altarpiece has a gallery of sculptures of Apostles, Evangelists, Patriarchs and Doctors with Christ in the centre. On both sides of the altarpiece stand, on high pedestals, images of St. Peter and St. Paul ; besides these there are four engravings representing the martyrdom of St. Catherine. The sanctuary, which rises three steps high, is of the same breadth as the nave, and extends from the foot of the high altar to the railings, which separate it from the nave. On the epistle side there is a large and rich ebony stand, which belonged once to the Convent of St. Francis. On either side of the sanctuary there are chairs for the Canons.

The Cathedral has one lateral tower having five bells, the biggest one is said to have been cast at Cuncolim in Goa and was installed in 1652. This is the same bell that used to be rung on the occasion of the *Auto de fe* during the Inquisition. The other tower collapsed in 1776.

The Place of Inquisition

It was situated to the south of the Cathedral square and in front of the Senate or Townhall, which place is now covered by the gardens of the Archaeological Survey. Originally it was the palace of *Sabaio*[1], and used to be the residence of Adil Shah before the conquest of Goa by Albuquerque and subsequently the residence of the Portuguese Viceroys and Governors till 1554, when it was shifted to the Palace of the Fortress. After the establishment of the Goa Inquisition in 1560, it was appropriated for its use. The Inquisition made additions and alterations in it to suit its requirements. According to the testimony of the travellers, it was a stately and superb edifice. Pryard, describes it as a vast edifice built of fine stone, with a large and magnificent hall, surpassing in grandeur even the splendid hall of the royal palace[2]. Its front was adorned by three lofty vaults and ascended by large stone steps. Its breadth was about 70 feet and as to the length, it cannot be ascertained, being surrounded with walls covering about two acres of ground.[3] The building included

[1] See History Chapter. [2] Pyrard, Pt II, p. 31. [3] Cottneau *op. cit.*, p. 70.

many halls, houses and prison cells required for its functioning — a chapel, an entrance hall, an audience hall, a hall where trials were held, residence of the First Inquisitor, secret house, house of doctrine and innumerable other prisons and houses intended for ordinary and special secret purposes, all these with one large edifice[1]. Dellon (1674) has given description of the audience hall which was called "*Mesa do Santo Officio*" or the "Board of Holy Office." It was adorned with tapestry, composed of taffeta, in stripes of blue and citrine colour. At one extremity was a large crucifix in relief reaching almost to the ceiling. In the centre of the room was a platform upon which stood a table, about fifteen feet in length and four feet broad with several arm-chairs placed around it[2]. This table is now in the Institute Menezes Braganza, Panaji.

The ecclesiastical tribunal of Inquisition was introduced into Portugal by King John III, to stop the tide of heresies of Luther and Calvin. He also introduced in his kingdom the Jesuits, and deputed St. Francis Xavier to Goa. It was introduced in Goa in 1560. Cunha Rivara in his "Historical Essay on the Konkani language" writes, "the whole system of the Inquisition aimed not only at extirpation of superstitious and idolatrous beliefs, but also of innocent usages and customs retaining even a trace of the Asiatic Society, which existed previous to the conquest by the Portuguese".[3] The tribunal met in the Palace of Inquisition but the sentence might be given in the See Cathedral or Bom Jesus after the solemn ceremony of the *Auto de Fe* or the Act of Faith.

The tribunal of Inquisition was suppressed by the Order of Marquis de Pombal in 1774,[4] but it was again re-established in 1779. Though revived it did not retain its original powers. It was in 1812 when the British Government had its garrison in Goa, that orders came from the Court of Rio Janeiro on the recommendation of that of London for the abolition of the Inquisition.[5] Baiao writes,[6] that during the period 1561 to 1774, 16,172 cases were tried by the Inquisition and about 119 Acts of Faith were celebrated.

Convent and Church of St. Francis of Assisi

The Convent of St. Francis of Assisi located to the west of the See Cathedral and the former Palace of the Archbishop that connect the See Cathedral to the convent, was built by the Franciscan friars in 1517. It was repaired between 1762 and 1765. Attached to the convent is the

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1 Abreo, M. V., *Narracao da Inquisicao de Goa*, Goa 1866, p. 57.

2 Priolkar, A. K., *The Goa Inquisition* Pt. II, Dellon's Account page 21.

3 *Ibid.*, p. 177, Cunha Rivara, J. H. *Ensaio Historico da Lingua Concani*, Goa 1858, p.64.

4 *Instruccoes com que El Rey Dom Jose* etc. p. 1.

5 Cottineau, *op. cit.*, p. 70.

6 Antonio Baiao, *A Inquisicao de Goa*, Vol. I, p. 293; Elkan Nathan Adler, *Auto de Fe and Jews*. Oxford University Press, Oxford 1908, Priolkar, *op. cit.*, p. 179.

church of St. Francis of Assisi, which was erected in 1521, and dedicated to the Holy Spirit and is richly ornamented. The church was again rebuilt in 1661. The convent and church of St. Francis of Assisi, offers the best specimen of the religious art of the 17th century. The most interesting feature of the church is the octagonal tabernacle in Baroque with Corinthian features. The exterior of the Church is in Tuscan order. The portal of the convent, is a rare specimen of Portuguese Gothic or Manueline architecture. The church faces west and has a nave with three altars or chapels on either side, a choir, and two alters in the transept besides the main altar. To the north of the main altar is a belfry and sacristy. The single storied convent was adjacent to the church in which is now housed the Archaeological Museum. Its pavement is built over the vault of the Mosque.[1] The church is without aisles. The nave is rib-vaulted, the internal walls separating the chapels and supporting the gallery on the top have frescoes showing intricate floral designs of Indian origin. In a niche on the facade there is a statue of St. Michael. There is a wooden statue of St. Francis Assisi on the pedestal having the insignia of the Franciscans. Above the tabernacle in the main altar is a big statue of St. Francis Assisi and another one of Jesus on the Cross. Beneath the two figures are inscribed the three vows of the Saint *viz.* poverty, humility and obedience. On either side of the main altar are beautiful paintings on wood depicting scenes from the life of St. Francis Assisi.

Basilica of Bom Jesus

At a short distance from the See Cathedral and located on the right hand side, is a massive structure of the famous Basilica of Bom Jesus, popularly known as the Church of St. Francis Xavier[2], the Patron saint

[1]. Fonseca, *op. cit.*, p. 223.

[2] St. Francis Xavier was born on April 7, 1506, in the Castle Xavier in the kingdom of Navarre, Spain. In 1522, Francis received tonsure, as a cleric of Pamplona, the capital of Navarre. When he was 19, Francis went to Paris to study at the University and he led there a gay and frivolous life. In 1530, Francis took the licenciate degree in Arts and soon after, obtained a teaching post in a neighbouring college. Here perhaps he would have remained had not Ignatius de Loyola, a master of spiritual life, arrived to pursue his studies at the Paris University and become his roommate. Francis was deeply influenced by Ignatius and in 1534 he pronounced his vows of chastity and pilgrimage to Jerusalem. He was ordained priest in 1537. Xavier came to Goa in 1542 and went about nursing the sick and instructing the native Christians. In the same year Xavier left for the South which became his field in his real apostolic work and labour. While here, he heard of the baptised but un-instructed Christians in the Malacca and he set sail for the islands where he taught, preached and nursed the natives. He returned to Goa in 1547 and taught for a time at St. Paul's college. In 1549, Fr. Francis once more left Goa for Malacca and from there sailed to Japan. In September 1551, Fr. Francis was appointed Provincial of all the Jesuits east of the Cape of Good Hope. In 1552, he left Goa once more for the East. He went to the Island of Sancian but was unable to enter China. Depressed and frustrated, Fr. Francis fell ill soon after and died on 3rd December, 1555.

of Goa. whose remains are enshrined in it and venerated. The site on which it is constructed was known as *Terreiro dos Galos* and was famous for cockfights which attracted many people.

'Bom Jesus' means 'Good Jesus' or 'Infant Jesus', to whom the church is dedicated. It is a superb edifice much admired for its architectural beauty. On the top of the facade are seen three letters '*IHS*' which are the first three letters of the word Jesus in Latin—*Iaeus Hominum Salvator*. It was built in the year 1594, out of the funds bequeathed by Dom Jeronimo Mascarenhas and consecrated in 1605. It was raised to the status of a Basilica by Pope Pius XII in 1946. Its facade, facing towards the west is an elaborate piece of workmanship and grandeur with its exquisite combination of Ionic, Doric, Corinthian Orders of Renaissance period and Composite styles in its architecture and excites the admiration of the spectator. The plan of the church is of cross design. On the northern side it is supported by three buttresses. It is built of laterite and is about 23.7 Metres high and 22.8 metres broad, divided into four parts—the lowest containing three elegant portals; the part immediately above having three large windows corresponding to the portals; the third, three circular windows; while the fourth forms a quadrangle richly embellished with arabesque. All these portions, adorned with pillars, relievos, and rich carvings, give the facade a magnificent appearance. The bell tower is on the back side. There is a projecting gallery for the use of dignitaries.

The interior of the church, built in the Mosaic-Corinthian style, is remarkable for its charming simplicity. Its length is 55.77 metres, its breadth 16.77 metres and its height 18.59 metres. On each side there are three rows of windows rising one over the other, besides those of the choir and corresponding circular ones. The walls are painted in white and greyish colours and decorated with gild lining. The church has got two chapels, a main altar and sacristy, besides a choir at the entrance. The columns supporting the choir have got a slab bearing inscriptions in Portuguese and Latin which record that the construction of the church of Jesus was commenced on 24th November, 1594 and Fr. Aleixo de Menezes the Archbishop of India and Primate of India consecrated it on 15th May, 1595 when it was completed. In the middle of the nave, on the north is the cenotaph of the benefactor of the church, Don Jeronimo Mascarenhas, the Captain of Cochin and Ormuz, who died in 1593. It is decorated with an apex in bronze, richly gilded and supported by two figures of lions. There is a wooden pulpit, richly carved, on the southern wall opposite the cenotaph, on its three sides there are figures of Jesus, four Evangelists and four doctors of the church. It is supported by seven figures at its bottom. As one enters to the right, beneath the choir, is an altar of St. Anthony and to the left is a well-carved wooden statue of St. Francis Xavier. In the transept on the northern side is the chapel of the Blessed Sacrament.

Chapel and Tomb of St. Francis Xavier

On the southern side of the transept is the chapel with gilded, twisted columns of wood with floral decorations where the sacred tomb of St. Francis Xavier was installed in 1659. Prior to it, it was kept in the chapel of St. Francis of Borgia in the same church, when it was brought there in 1624 from the Church of College of St. Paul after canonization of the saint by the Catholic Church in 1622. The body of the Saint was placed in the new silver casket in 1637 which was made by Goan silversmiths during 1636-37. The necessary funds were collected by Fr. Marcelo Francisco Mastrilla, who succeeded in obtaining a good donation from Captain Antonio Telles, while drawing his last will.[1] The tomb was gifted by Grand Duke Cosmos III of Tuscany in memory of a pious gift of a cushion by Fr. Francisco Sarmento, the Jesuit Procurator of Goa Province, upon which the head of the Saint rested for many years. Givonni Batista Foggini, a sculptor from Florence took ten years to complete the work of the tomb. It arrived in Goa on 13th September 1698 with emissary of the Duke of Tuscany and the Italian artist Placido Francisco Ramponi who erected it by the 8th November, 1698.[2]

The interior of the chapel is richly adorned by wood carvings and paintings depicting the scenes from the life of the Saint. On the left side of the shrine are paintings belonging to Italian school and are arranged in three rows. In the bottom row are two paintings showing the Saint being received by a certain Portuguese nobleman and his interview with the King Bamgo in Japan. In the three paintings from the middle row the Saint is shown praying for cessation of plague in the Manus island, kissing the repulsive ulcer wound of a patient and Pope Paul III pronouncing his apostolic benediction on the eve of his departure to India, respectively. The three paintings in the top row includes three scenes of Xavier as servant of a knight, his sad demise in the island of Sancian, off the the coast of China, and the Saint in ecstacy.

The tomb of the Saint consists of three parts-the rectangular base, the masoleum and the silver casket. The quadrangular mausoleum is of a reddish-purple colour and is decorated with carving in white marble. The middle portion is of slightly lesser dimensions and has got plaque in bronze on each of its four sides on which are depicted scenes from the life of the Saint. There are two cherubs of pure carrara alabaster in each of its four corners. The scenes on the plaque depict-Xavier preaching to the people of Malacca, holding a crucifix in his left hand and baptizing the native. In the third scene, Xavier having been attacked by the people of Moro island tries to escape by crossing the river. The last

[1] Azevedo Carlos de, *Arte Crista na India Portuguesa*, Lisbon, pp. 149-151.

[2] Azevedo, Carlos de, "*Uma Artista Italiana em Goa*" in "*Garcia de Orta*" Lisbon, Special issue 1956 pp. 277, 299-300.

scene depicts Xavier dying in a hut in the island of Sancian. Above the quadrangle there is a balustrade of red Jasper with white shoots.

The silver casket at the top serves as a relinquary and contains the sacred relics of the body of St. Francis Xavier. According to Felici Girardi,[1] the body of the Saint was placed in this casket on the 2nd December, 1637. The casket is divided on each side by seven panels, each of which has got two plates, one over the other which are carved with important scenes from the life of the Saint. It is about 2·13 metres long, 0·91 metre wide and 0·91 metre high, exclusive of the lid, which bulges out in a curvature of 0·45 metre. There is a Cross on the top on a pedestal with 2 angels. The space between the panels is surmounted by figures of angels 0·30 metre in height. The weight of the casket is 300 lbs.[2] A beautiful silver statue is seen in front of the casket. The casket is the best specimen of combination of Italian and Indian art.

The corridor on the left side of the Chapel of St. Francis Xavier leads to the sacristy of the Church of Bom Jesus. The walls of the corridor are decorated with nine beautiful paintings on canvas. The door of the sacristy is richly carved and sculpture of four saints are seen in its relief. It is an oblong vaulted structure. Alongside the walls, are kept the portraits of saints above richly carved chest of drawers. In the iron chest on the altar is seen a golden rose blessed by Pope Pius XII and gifted in 1953. Baltazar de Veiga (1659) from Lisbon founded the vestry.

Exposition of the relics of St. Francis Xavier

So far, there have been thirteen expositions of the sacred relics of St. Francis Xavier. These were in 1782, 1859, 1878, 1890, 1900, 1910, 1922, 1931, 1942, 1952, 1961, 1964 and 1974. The recent (13th) Exposition of the 422-year-old body of St. Francis Xavier commenced on the 23rd November, 1974 at the majestic See Cathedral at Old Goa and lasted until the 5th of January, 1975. Over 9,00,000 people including foreigners and persons from outside Goa visited the district at the time of the Exposition. Elaborate arrangements were made at the State level to look after the comforts of the visiting tourists and pilgrims. These included facilities for accommodation, transport, food and health amenities and entertainment programmes and the maintenance of law and order.

On the eve of the feast, considerable activity was noticed. The entire area around the main churches was occupied by more than 600 stalls selling wares from sweets to liquors and candles to earthenware pots.

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[1] Azevedo, *op. cit.*, p. 135.

[2] Fonseca, *op. cit.*, p. 294.

The Chapel of St. Catherine

Situated to the west of the Church of St. Francis Assisi and near the site of the gate of the old wall of the Muslim city, the Chapel of St. Catherine stands as a monument to the conquest of Goa in 1510 by Albuquerque under whose orders it was built. It was enlarged by Governor Jorge Cabral in 1550 as is stated in the Portuguese inscription on the outside wall. In 1931, in order to record the historical importance of the site, was placed another marble slab with the inscription in Portuguese which reads, " Gate of the wall of the Muslim city ". The facade of the Chapel is in Renaissance style and bears a statue of Our Lady. There is only one altar. It is dedicated to St. Catherine. There is a statue of Our Lady of Piety in a niche on the top of the altar.

The Royal Hospital

It was situated by the side of the Chapel of St. Catherine facing towards the north. After the conquest of Goa in 1510, Albuquerque established this institution for the benefit and care of his soldiers. The regulations were framed in 1520 placing the hospital on a firmer basis. About 1524, the management of this useful institution was placed in the hands of the *Santa Casa de Misericordia* (The Holy House of Mercy). It was under their supervision till 1591. At that time, the average number of patients were said to have been between four and six hundred every year and the subsidy granted for its maintenance amounted about £ 500 annually. Its building was reconstructed in 1597 when its administration was made over to the Jesuits. The travellers who visited Goa in 16th and 17th century spoke in flattering terms of the elegance of its structure and order and magnificence prevailing therein. Pyrard, who was treated in this hospital by the beginning of the 17th century considered it the best in the world.[1] The hospital was a two-storeyed building. There was a symbol of royal arms on its facade and bore inscription " Hospital Real ", which is now preserved in the Museum at Old Goa. With the decline of the City, the fame of the hospital began to decline gradually. The Jesuits continued to supervise it till their expulsion in 1759. In the latter part of the 18th century, its management suffered and was neglected. Its majestic edifice had fallen, and it was removed in 1770 to the College of St. Roque and then to Panelim in the palace of the Viceroy, who about this time had transferred his residence to Panjim. The Institution was transferred to Panjim in 1842 and was named as Military Hospital and was under the control of the Chief Health Officer.[2]

Arsenal

To the west of the Royal Hospital was the building of Arsenal i.e *Ribeira Grande*. It included besides the dock, other important public

[1] Pyrard, *Voyage* pt. II, p. 3.

[2] Fonseca, *op. cit.*, p. 236.

establishments like mint and gun-foundry where everything required for the army and navy was manufactured. There was a Chapel attached to it. It was established on the old arsenal of the Muslim rulers of the city. The spoils which the Portuguese found in its docks after the capture of the city included forty large ships, twenty-six brigs, a large number of *fustas* and forty heavy guns in its magazines, fifty-five pieces of ordinance called falcons, two hundred muskets and a large quantity of powder, pitch, naphtha, oil, steel, iron, copper, cannon balls and many other articles.[1] Through its gate, the Muslims had taken out their ships ashore, when Albuquerque captured Goa in 1510. Subsequently, it was dedicated to St. Catherine, which Chapel now bears testimony to that historical event. After the conquest of Goa, necessary improvements were made in the working of the Arsenal and was placed in charge of a Superintendent with the title of *Feitor*. This was later changed to *Vedor da Fazenda*. In 1526 rules about its functioning were made by Affenso Mexio, the then *vedor* of the Treasury. In 1540, 700 employees were working in it. It was in this *Ribeira* the money was minted, cannons were cast and other work connected with war vessels and merchantmen was done. These smithies, foundries and other workshops were provided with room for artisans and workmen. All these were built of stone to provide against fire. On 9th June 1753, the vast establishment was destroyed by fire. It was considerably restored in 1773 and was headed by *Arsenal de Ribeira de Naus*. In 1841-42 the personnel of the Arsenal consisted of 475 employees and the expenditure was about £ 15,009. It was abolished in 1869, its vast offices being razed to the ground. Thus disappeared this monument of the power, politics and social status of the Portuguese since the sixteenth century.[2] Some of the cannons manufactured in the Arsenal are still lying in the old Fortresses of Goa, Daman and Diu and two of their specimens are preserved in the Museum at Old Goa.

The Old Pillory

The Pillory is situated on the eastern side of the road leading to the present Gomanteshwar Temple, in the city square which was once the bazaar surrounded by shops and was used for punishing offenders of the law, who were tied to it and publicly whipped. It is a lone pillar on a raised platform. It is of basalt and had iron rings fixed in it and from its shape and moulding it seems that the pillar might have originally formed part of some ancient Hindu temple.

Convent and Church of St. Cajetan

It is opposite the See Cathedral on the other side of the road passing through the Viceroy's Arch. It is dedicated to ' Our Lady of Divine

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[1] *Ibid.*, p. 238; *De Barros*, *Dec* II, Liv. V. Cap. IV.

[2] Fonseca, *op. cit.*, pp. 238-242

Providence '. The altars have paintings depicting scenes from the life of St. Cajetan. The Church and the Convent are popularly known as St. Cajetan Convent and Church. Italian friars of the order of Theatine's came to India under orders of Pope Urban III to preach Christianity in the kingdom of Golkonda. As they were not permitted by the Sultan of Golkonda to work in his kingdom, they settled down in Goa in 1639. The Convent was constructed in 1649 and the Church in 1651.[1]

The Church is built after the style of St. Peter's in Rome. It is architecturally Corinthian both externally and internally. The altars, with rich carvings on them, are heavily gilded and are in Baroque style. The Church has a beautiful facadel ooking towards the west and hemispherical cupola. The facade has got two bell-towers on either side and four niches in which are kept the images of the Apostles, Sts. Peter, Paul, John and Matthew. The Church is vaulted and the following words of Christ are inscribed on the threshhold in bold letters, DOMUS MEA DOMUS ORATIONIS (My House is a House of Prayer). The main body of the Church is designed after the plan of the Greek Cross internally and oblong externally with a nave ending in apse and aisles marked by four massive piers faced by Corinthian pilasters. The piers also form the base, supporting at the crossing a circular dome which rests on a drum and was crowned by a lantern. It is 36·88 metres long and 24·68 metres broad. The external architecture is of Corinthian style while the internal is Mosaic-Corinthian.[2]

As one enters, there are three chapels or altars on the left from the main altar, dedicated to the Holy Family, Our Lady of Piety and St. Clare respectively, while the three altars to the right are dedicated to St. Agnes, St. Cajetan and St. John. The main altar in the sanctuary is dedicated to Our Lady of Divine Providence. It is remarkable for its gilded decoration. All of the other altars are profusely carved and gilded in Baroque style with twisted shafts and figures of angels dominating in each. On these altars there are also paintings on canvas of the Italian school, some of them depicting scenes from the life of St. Cajetan. The pulpit is richly decorated by carvings and is supported by the figures of a bull, an eagle, an angel and a lion which are the symbols of the four great evangelists. A painting of St. Cajetan with the Infant Jesus in his arms adds to the sobriety. In the crossing is a square raised platform. There is a well or tank beneath it and it has led to many conjectures. Some regard that the platform covers the holy tank or *tirth* of a Hindu temple that once existed on the site, while others explain that the water reservoir at the centre of the building was planned by the architect to afford great stability to the structure.

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[1] *Annuario*, 1955, p. 90; Fonseca, *op. cit.*, p. 248.

[2] *Ibid.*, p. 449.

The Gate of College and Church of St. Paul

On the main road leading to Ponda and to the south of the Church of St. Cajetan is seen the Gate of the famous College of *Santa Fe* or St. Paul. The College was established for giving instructions to the new converts of all races and nationalities of Asia in various arts and sciences, and qualifying them for preaching the Gospel in their own languages in different parts of the Continent. It was founded by Diogo Borba and Minguel Vaz, both of whom took keen interest in the propagation of the Catholic religion. The foundation stone of the building was laid on the 10th November, 1541, on the site of the mosque by the side of the road called *Rua de Carreira dos Cavalos*, and subsequently known as the road of St. Paul. The college with its church was completed towards the close of 1542. The church was consecrated on the 25th January, 1543, the day of the conversion of St. Paul.[1] The income of temples from the Island of Goa was granted for the maintenance of the College.

The college rose to great importance when St. Francis Xavier, in 1544, came to reside in it at the request of Father Borba. On the latter's death, the Apostle took charge of the college and all that belonged to it, in the name of the Society of Jesus, which was already established in Goa. According to Pyrard (1608), the college in its days of glory had a strength of 200 and at one time even 3,000 students.[2]

This college is connected with many important events in the annals of the Catholic religion in India. In the St. Paul's Church the Pious representations in the passion of Christ (Santos Passos) were first introduced in India and the first mass was said at the sound of the organ. There, the ambassador of the King of Cambay, the first three Japanese who embraced Christianity, many noblemen, and a vast number of pagans were baptized. There, St. Francis Xavier preached the Gospel to crowds of people, and there his body was first deposited when brought from China. There, too, subsequently were the remains of the Jesuit martyrs of Cuncolim buried. In 1560, a new building of the college was constructed on its old site. It was beatuiful and magnificent. Some years after, a crack was noticed in its walls. It was, therefore, supported by three very extensive arches from outside and a highroad passed below them. The building was called Church of St. Paul of Arches.[3]

The college possessed a vast library and in 1556 a printing press was established, being the first press in the whole of the East. Following are the first publications : *As Teses ou Conclusoes publicas* printed by Joao Bustamonte in 1556; *Catecismo da Doutrina Crista* by St. Francis Xavier

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[1] Fonseca, *op. cit.*, p. 260; *Lendas da India por Gaspar Correia*, Lisboa, 1860 Vol. IV, p. 289; Arch. Port. Or. Fase V doc. 75, total rent of temples was Pardaus 768.

[2] *Orie* ·· *nquistado*, Vol. II, p. 42 ; Pyrard, Pt. II, pp. 34, 48.

[3] Fon ·· *p. cit.*, p. 263.

in 1557; and *Colloquios dos simples e Drogas Medicinais* by Dr. Garcia da Orta in 1563.

In 1570, when the city was afflicted with the epidemic, the locality in which the college was situated became so unhealthy that about fifty-eight priests had fallen victims to it. For this reason, the Society looked for a plot on the hill of *Nossa Senhora de Rosario*, which was regarded as a very healthy spot, where a house for the residence of the sick members was built. This was known as College of St. Roque and later on denominated as *S. Paulo o Novo*.

By 1623, when *Pietro della Valleu* visited Goa, all the bustle and activity had disappeared from the College, together with the festivities in the Church. In fact the College was transferred to the new building "*Colegio de S. Paulo o Novo*" on the hill of *Nossa Senhora do Rosario*.

By now a facade of the Church of Doric order escaped the general wreck and has been preserved, it being the only relic of the famous college and Church of St. Paul.[1]

Chapel of St. Francis Xavier

The chapel was within the enclosure of the College of St. Paul and was dedicated to either St. Anthony or St. Jerome. As it was used by St. Francis Xavier, it was rededicated to him after his canonisation in 1622. The original chapel was in existence in 1545. With the abandoning of College of St. Paul in 1570 due to the outbreak of the epidemic, the Chapel fell into ruins and the present chapel was built in 1884. It has only one altar. Its architecture is of Doric order.

The Church and Convent of St. Monica

On the holy hill opposite the Church of Bom Jesus and on the way leading to the Church of Our Lady of Rosary is a huge three-storied building of laterite. It is a square on plan with a large inner courtyard around which is cloistered a verandah and a large number of cells and halls. It has a vaulted ceiling and in some of the halls it is richly painted with floral decorations and scenes from the Bible.

The construction of the convent and church was started in 1606 and completed in 1627. St. Monica's Nunnery is the oldest and the biggest nunnery in the whole of Eastern Asia and the only one in Goa until 1886. The monastery was meant for cloistered nuns, accommodating on an average hundred nuns at a time. At the top of the entrance of the convent of St. Monica is the coat of arms, inscribed in a wall. There were eleven chapels in the convent besides the novitiate and seminary for the girls. The Church attached to the monastery is dedicated to Santa

[1] Fonseca, *op. cit.*, pp. 260-265; Braganca Pereira *Historia Religiosa de Goa* in *O Oriente Portugues* No. 6 of 1934, pp., 338-63.

Monica, mother of St. Augustine. Its external architecture is a combination of the Tuscan, Corinthian and Composite Orders, and the interior belongs to the Doric and Composite.[1]

Convent and Church of St. John of God

To the right of the Convent of St. Monica, is the Convent of St. John of God, erected in 1685. The Convent was founded by the Order of Hospitallers of St. John of God, whose aim was to care for the sick and wounded. The construction of the Church which was commenced in 1691 was completed in 1721. A small chapel was also built and dedicated to Our Lady of Success. The nuns of St. Monica bought the Convent after 1835. It was rebuilt in 1953.[2]

Convent and Church of the Miraculous Cross

The Church of the Miraculous Cross was situated on the southern border of the city of Old Goa and was built by the Carmelites in 1619, and again rebuilt in 1674. The Convent was built in the year 1621 and handed over to the Oratorians in 1709, following the expulsion of the Carmelites. At present, there remains only a facade of the Church, in a state of ruin. The Cross of Miracles was transferred to a Chapel in See Cathedral in 1845.

The Church of St. Augustine

To the west of the Bom Jesus, on the Holy Hill, is situated the tower of Church of St. Augustine. It is about 46 metres high, formed part of the facade of the Church of St. Augustine and served as a belfry. The tower of the Church is in ruins.

The Convent of St. Augustine was erected in 1572 by the friars of the Augustinian Order in Goa, and in course of time considered to be one of the richest convents. It was reconstructed between 1597 and 1602. Close to this convent to the north stood the church of St. Augustine, a spacious building, with its facade facing the west. It had two towers which were very high and contained bells of an enormous size. It also had a nave with a vault which was much admired for its engineering skill. The building was designed in the Gothic style. The church was erected at the same time as the Convent. It had eight richly adorned chapels and four altars. The Church was dedicated to Our Lady of Grace. In this Convent hundreds of students from different parts of the world were given lessons in the discipline of Philosophy, Religion, Theology and Christianity. The Convent was abandoned in 1835. The vault of

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1 Fonseca, *op. cit.*, pp. 304-310.

2 *Ibid.*, p. 314.

the Church collapsed in 1842 and under the debris, the colossal image of St. Augustine, founder of the Order and the statue of Our Lady of Grace were buried. Excepting the lofty tower, 46 metres high, all other parts of the once imposing structure are now in ruins beyond recognition.[1]

Chapel of St. Anthony

It is situated near the tower of St. Augustine on the Holy Hill and is dedicated to St. Anthony, the national Saint of Portugal, and was held in great veneration by the Portuguese Government and came to be known as Royal Chapel. It was built in 1543. It has a vaulted chancel. The side altars were dedicated to Our Lady of Fever and Sts. Cosmos and Damian. There are four frescoes on the wall of the chapel with painting of the doctors of the Church. It was closed in 1835 and opened again by the Portuguese Government in 1894. It was placed in charge of the Monastery of St. Monica in 1932. It was completely restored by the Portuguese Government in 1961.

Chapel of Our Lady of the Rosary

It is situated on the Holy Hill, at its extremity, which commands a beautiful view of its surroundings. It has historical significance. From the site of this Chapel in Old Goa, Alfonso de Albuquerque directed the battle against Adil Shahi troops, which culminated in the conquest of Goa in 1510. It was constructed in 1526 and raised to the status of parochial church in 1543 and was again notified as Chapel of See Cathedral in 1869. It belongs to the first period of the Portuguese Church architecture in Goa. Its ground plan differs from that of the other Churches in Goa. It is built in laterite and plastered with lime mortar. Its portico is two storied. It has only one tower and cylindrical turrets on each side of its facade. It looks like a fortress church and is the specimen of Manueline style in Goa.

The Church belonged to the Dominicans and was one of the most populous parishes in the city. It has two chapels and three altars. The main altar is dedicated to Our Lady of Rosary. The marble cenotaph to the right of the main altar of the tomb of Catarina a Piro in the wall of the Chancel has intricate designs in the Bijapur style of carving. It reads, "Below there is the sepulchre of Garcia Sa (1549) who was Captain of Malacca and brought this Lady of Plebeian origin born in Miragia in Portugal and married her at the time of drought when he was Governor". Tradition has it that St. Francis Xavier administered the marriage oath.

The Archaeological Museum

The Archaeological Museum maintained by the Archaeological Survey of India is located in a verandah adjacent to the Church of St. Francis of

1 Fonseca, *op. cit.*, pp. 313-314.

Assisi. It has a collection of sculptures collected from different places in Goa. Among the antiquities are to be found some interesting inscriptions, image of Narayan and Betal, a few *shivalingas*, *sati* and *hero* stones, coat of arms of Bishops, etc. A bronze statue of Alfonso de Albuquerque Portuguese Governor (1509-1513) is placed at the entrance of the Museum. There is a portrait gallery on the first floor which contains a large number of portraits of Portuguese Governors who ruled over Goa from 1510 A.D. to 1961 A.D. Some of the portraits were painted by Goan artists.

Gomanteshwar Temple

The temple of Shiva under the name of Gomanteshwar or Goveshwar, is located at *Brahmapuri*[1] and is linked to the village by a *kuchcha* road. It is believed that the ancient holy place of worship of Gomanteshwar was destroyed by the Bahamani kings and the same was rebuilt by Madhava Mantri, of the Vijayanagar empire, and hence the tank in front of the temple is still preserved and is known as *Madhava Tirtha*. Near the Tirtha, there is a site of the parish Church of *Santissimo Trinidade* (the most Holy Trinity), which is belived to have been built on the ruins of the temple or Pagoda of Shiva by the end of the 16th century.[2] During the brief period when the Inquisition was suspended in 1775, the worship of the deity Goveshwar was allowed to be renewed. But the shrine was destroyed again on June 6, 1779, by the Viceroy Dom Frederico Guilherme de Souza, under orders from the Queen of Portugal.[3] The original temple is reported to have been constructed in the 14th century and the consecration of the present temple is said to have been reconstructed in saka 1869/1947 A.D.

The structure of the present temple is of simple style with a tiled roof. *Mahashivratra* is celebrated at the temple.

PANAJI

The town of Panaji in the Tiswadi taluka is located on the southern left bank of the river Mandovi which has a river frontage of more than a kilometre and a half to the north. It is the capital of the Union Territory of Goa, Daman and Diu and is also the headquarters of the district of Goa. Lying in 15° 29′ 30″ North Latitude and 73° 49′ 45″ East Longitude, Panaji occupies a narrow strip of the village of Taleigao which is bounded on the east by a hill, and on the west by an esplanade.

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[1] A site in Old Goa, which was a colony of Brahmins from ancient times. According to tradition it was founded by the celebrated minister of Vijayanagar empire, Madhava Mantri.

[2] Fon a, *op. cit.*, p. 274.

[3] Pissurlencar P. S., "*As Primativas Capitais de Goa* in *O Oriente Portugues* No. 1 of 1931, *Nova Goa*, p. 18.

The etymology of the name of the town of Panaji can be traced in a copper plate inscription of the regime of Kadamba Tribhuvanamalla wherein the place has been mentioned as Panjani Khali. Panja means a small boat in Sanskrit while *Khali* means a canal of water or a creek. Thus in its entirety the word may mean a locality situated on the bank of the canal or creek where small crafts could reach. According to Fonseca, the author of "An Archaeological and Historical Sketch of the City of Goa " the word is referred to in the vernacular dialect of the country as *Pongi* meaning probably arable land that cannot be inundated. The name was changed to Panjim by the Portuguese and has been renamed as 'Panaji' subsequently with the Liberation of the territory. The, Portuguese named it 'Nova Goa' i.e. ' New Goa' as against their old capital of Goa, in 1843 A.D.[1]

Historical Background

The earliest reference to Panaji is noticed in the inscription of the Kadamba king, Tribhuvanamalla alias Vijayaditya and is dated February 7, 1107. It described the charitable deeds *Purta Dharmas* of Gandgopal Kelima, who was then administering the Panaji region on behalf of his Kadamba lord.

The family of the Kelimas continued in charge of Panaji since the beginning of the reign of the Goa Kadambas and the family seems to have enjoyed the confidence of their master. Kalapa[2] was placed in charge of Panaji under Shashthadev II (1010-1045 A.D.), the founder of the Goa Kadambas. Kalapa's son Nagana, continued in his father's office under Jayakeshi I, who made Gopaka or modern Goa Velha, the capital of his maritime empire.

Gandgopal to whom the inscription refers succeeded his father Nagana, and by the grace of his master, Tribhuvanamalla, he set up Brahmapuri of twelve learned Brahmins at Gopaka, for imparting Sanskrit learning and made them grants of fields and orchards for their maintenance. An image of the goddess Sarasvati was also installed for workship and provision was made for giving regular sermons in her temple. Among the other charities, mention is made of the construction of a bund to a tank at Gopaka which was named after him as *Gandagopal Setu* and which may be identified with the tank at Goa Velha, at present known as *Kadambarayache Tolem*.

During the Muhammadan rule, the town was only remarkable for the castle of Yusuf Adil Shah, which is now transferred into the Secretariat. At some distance from it stood a fort or bulwark on the neighbouring hill amid a dence forest.

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[1] See Chapter 2—History for historical background.

[2] It was Kalapa who founded the village of Santacruz. It is also known as Calapur after him.

This bulwark was ill-constructed, while the castle was strongly built and defended by fifteen guns and a garrison of about three hundred soldiers. It was from this castle that the Muhammadans under Yusuf Gurji offered a vigorous resistance to Albuquerque on his first invasion of Goa in 1510, and it was within view of the castle that his fleet lay at anchor during the rainy season following his expulsion from the town by the overwhelming forces of the Sultan of Bijapur.

After the second capture of Goa by the Portuguese in November 1510, Panaji was selected as an important military station, in consequence of which a new bastion with breast work was erected, and the castle of the Muhammadans, which had been partly burnt by Albuquerque was repaired.

As a precautionary measure, all the ships that entered or left the river were subjected to inspection by the Captain, and obliged to obtain passports from him. In the course of time a few houses were built in Panaji, in one of which a brother of the famous King of Cambay, Bahadur Shah, is said to have lodged during his sojourn in Goa in 1533.

During the first century of the Portuguese ascendancy, it formed a temporary residence for the Viceroys and Governors on their arrival from or departure to Portugal. Ordinarily, it was the rendezvous of the fishermen and native sailors, who went there to haul up their boats on the margin of the river.

During the 17th century, Panaji continued to be inhabited chiefly by fishermen and ordinary artisans. In consequence of the terrible epidemic which was raging in the old city of Goa and its suburbs, the Viceregal residence was transferred to this place in 1759, from which year dates its gradual rise.

In 1811, the Custom House was also shifted there, followed soon after by the Office of the Accountant General, the High Court, the Chancery and other Public Offices, and its population thus began to increase steadily.

During the administration of Dom Manuel de Portugal e Castro (1827-35), Panaji was raised to its present conspicuous position.[1] In 1843, it was formerly declared by a Royal Decree to be the capital of Portuguese India and continued to be the seat of the Governor till December 19, 1961. The place even now continues to be the capital of Territory of Goa, Daman and Diu.

The first edifice that meets the eye on touching the principal pier is the Custom House (Alfandega). Close to the Custom House on its eastern side, is seen the Secretariat of Goa, Daman and Diu. It is a double storeyed edifice, facing the east and commanding a beautiful view of the riverside.

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[1] Fonseca, *op. cit.*, pp. 97-99.

With a population of 34,943 as per the Census of 1971, the town of Panaji is located at an altitude of 58 metres and receives an annual average rainfall of 2,569·2 mm. The maximum temperature is 31·3°C while the minimum temperature is 23·7°C. According to the Census of 1971, the constitutional units of the Panaji urban agglomeration covers Panaji Municipal area, Calapur, Murda Panelim, Chimbel, Cujira, Morambi-O-Grande Merces, Morambi-O-Pequeno Merces and Taleigao. The nearest railway station is Margao which is located at about 33 kilometres to the south of Panaji and the nearest sea port is Mormugao Harbour, the same distance to the south-west.

Description

Panaji, the administrative headquarters of Goa, Daman and Diu, is almost at the geographical centre of the semi-circle of the land that is the Goa district. In its lay-out and structure, the town breathes its functional characteristics, past and present. With the shifting of the administration from Old Goa to Panaji, the town acquired great importance as the centre of the Portuguese colonial empire in the East. The layout is the typical Latin gridiron with roads, lanes and squares. The estuarine front extending from Gaspar Dias or Miramar beach to the end of the Mandovi bridge has a succession of open spaces for recreation, interspersed with newly constructed hotels and modern apartments. Nearer the town centre are the hospital, the Goa Medical College, Public libraries and the vegetable market. Almost at the eastern end of this frontage is situated the palace of the Adilshahi antiquity and the traditional seat of the Goa Administration. The estuarine frontage has a small but useful landing jetty in a scenic setting for passenger ships. Towards the town, the place is hemmed in by other administrative buildings, banks and hotels. The tourist activity is symbolised by the Government tourist centre and the crowded taxi stands, surrounded by retail shopping streets. The eastern part of the town is middle class residential area, dominantly Christian in the north and Hindu in the South; these are the Fontainhas and Portais zones. Though the earlier town clung to the tableland base, its extension was mainly on the slope and on the plateau top of Altinho which is a noteworthy feature. It is the richer class residential area with several important institutions and public buildings. The Church and the Bishop's residence are prominent in the landscape. With the construction of the Nehru bridge also known as the Mandovi bridge, Panaji's link with North Goa have become stronger. The bridge has improved the town's economic base through increased volume of road borne trade and passenger traffic.

On the hillock known as Altinho, are located the Government Secondary High School, the Mental hospital, the Polytechnic, the Circuit House, All India Radio, the Patriarchal Palace, Goa Observatory, etc.

From the hill can be observed a lovely panorama which gives a picture of the town situated below with the river Mandovi cutting across. The broad estuary of the river commanded by the picturesque forts of Aguada and Reis Magos and the Indian Ocean extend a bluish-green expanse to the limit of the horizon. A person is thrilled to observe the sunset from the hill. Since liberation, many public and private buildings have come up in the town.

Educational Facilities

Panaji is considered to be a seat of learning. At present it has an Arts and Science College, a Commerce College, a Medical College, an Engineering College, a Pharmacy College, a Teachers' Training College, a Law College, a College of Art and a Polytechnic Institution. The Centre of Post Graduate Instruction and Research of the University of Bombay, provides facilities for higher studies. There are nineteen primary schools, eleven higher secondary schools and two junior secondary/ middle schools. Besides these, there are three shorthand/typewriting institutions.

Medical Facilities

Medical aid is provided to the town by three hospitals, one dispensary, one health centre, one T. B. clinic, eight nursing homes, a family planning centre and a mental hospital. There are also a number of private medical practitioners serving the town populace.

Entertainment Facilities

Seven public libraries including reading rooms cater to the aspiring students of the town. There are two cinema houses, and three auditoria/ drama halls. The foundation stone of Kala Academy's multipurpose new theatre complex project was laid at the hands of Shri Y. B. Chavan, the then Union Minister for Finance, on Friday the 31st May, 1974, at Campal ground, Panaji. The sports clubs functioning in the town are : Clube de Vasco da Gama, Club Tennis de Gaspar Dias, Young Christian Workers' Club, St. Inez Sports Club, Dempo Sports Club, Panaji Gymkhana, Clube Desportivo das Fontainhas, Batulem Sports Club, Posts and Telegraphs Recreation Club, Secretariat Gymkhana, Athletic Club de Goa, Electricity Department Sports Club, P.W.D. Recreation Club, Sporting Club of Goa, Military Engineering Service Sports Club, Mala Sports Club, Goa Police Sports Club, Dhempe College of Arts and Science Gymkhana, Navrang Stars, Young Challengers Sports Club and Al-Guimaraes Sports Club.

The principal objects of interest in the town are the Church dedicated to Our Lady of Immaculate Conception, the shrine dedicated to Our Lady of Fatima, the temples of Mahalakshmi, Maruti and Vithoba and a

mosque known as Jumma Masjid, the Miramar beach, Dona Paula and few statues. Besides, the Cabo-Raj-Niwas, the official residence of the Lieutenant Governor located at Caranzalem, also forms an object of interest.

Church of Our Lady of Immaculate Conception

Facing the main square in the heart of the town is the imposing Church of Our Lady of Immaculate Conception with its grand flight of steps and lofty bell tower. It was erected before 1541 on the pattern of the Church at Reis Magos. Originally a chapel, it was elevated to a church in the year 1600 and was renovated in 1619. The bell at the top of the Church is the second largest in Goa. It has an inscription on it and weighs about 2,250 kilograms. The image of Our Lady of Fatima is placed on one of the altars which is devoted to Bom Jesus. Two principal feasts are celebrated at the Church every year, on 13th May in honour of Our Lady of Fatima and the other on 8th December in honour of Our Lady of Immaculate Conception. Fairs are held on both the occasions which people attend in large numbers.[1]

Shrine of Our Lady of Fatima

The shrine dedicated to Our Lady of Fatima is located in the compound of Don Bosco's High School. It is a modest structure built in an octagonal shape and considered as a good specimen of modern architecture. It was erected on the 13th October, 1970. In the shrine is a main diamond shaped altar, built in marble behind which an imposing Crucifix is placed. To the left and right of the altar are the statues of Our Lady of Fatima and Don Bosco, respectively. Besides the main entrance, there are four side entrances to the shrine. The feasts of Our Lady of Fatima, Don Bosco and Christmas are celebrated here.

Mahalakshmi Temple

The temple dedicated to Goddess Mahalakshmi is situated in the heart of the town at the foot of the Altinho hill. It was constructed with the generous contribution given by the devotees of the deity. The original place of the deity was near Maem in Bicholim taluka, which was transferred later on to the present site. The deity was consecrated on *Ashadh Shudha 7*, *sake* 1739 (1817 A.D.). The idol in the sanctuary is carved in a black stone, with four hands and is placed in a beautiful silver plated canopy. It is considered to be the peaceful or *satvika* form of Devi. The *shakti* cult believes that Mahalakshmi is the original Goddess par excellence and Brahma, Vishnu and Shiva are her forms according to three aspects (*gunas*) i.e. peaceful or calm (*satva*), creative action (*rajas*) and destruction (*tamas*) respectively. Close to the temple is a shrine of Maruti.

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[1] *Annuario*, 1955, p. 91.

The main festivals celebrated at the temple are those of *Chaitri Paurnima* and *Rathasaptami* when nearly 5,000 people assemble.

Maruti Temple

The renowned shrine of Maruti is situated at Mala area and the place is known as Marutigad. The deity was consecrated and installed on *Margashirsha Vadya Dvitiya* in *saka* 1855 or 1933 A.D. To reach the shrine one has to climb a flight of 130 steps. It is a small structure having a spacious area around it. It consists of an inner shrine which contains an idol of Maruti in a standing posture carved in white marble stone. A fair is celebrated at the temple with all rituals on *Margashirsha Vadya Dvitiya*, the auspicious day on which the deity was installed and consecrated. Thousands of devotees gather to invoke the blessings of the God. A palanquin procession of the deity is taken out in all traditional glory on that day. During the fair, a number of stalls spring up and the important commodities sold include utensils, clothes, stationery articles, sweetmeats, bangles, plantains, etc. The fair continues for four days and sale of all these commodities is estimated to be about Rs. 10,000 to Rs. 15,000.

Jumma Masjid

Jumma Masjid located in the heart of the town near the Church of Our Lady of Immaculate Conception, is distinguished by the star embossed at the front entrance as also the top crowned by minarets. It has no dome. Built in simple style the mosque is reported to have been constructed by Sulemnan Shet and Aba Shet approximately 200 years before. It was renovated in 1935.

Ramzan Id and *Bakri Id* are the two festivals celebrated at the mosque with all traditional glory when more than 2,500 persons assemble.

As there is no direct source of income, the expenditure of the mosque is met by *chanda* or donations collected from (Muslim) *jamatis* or others. Annual income of the Masjid is calculated to about Rs. 13,200 out of which an amount of Rs. 5,000 is given to ' Anjuna Nural Islam School '. The first and second floor towards the left while entering the mosque, is given free of charge for conducting classes in Urdu as well as in English medium.

Miramar Beach

The Miramar beach also known as Gaspar Dias beach, is a lovely beach studded with palm groves and pine trees along the estuary of the river Mandovi. It lies two kilometres to the south of Panaji and can be reached by bus within five minutes from the bus-stop near the ferry wharf. The beach is a favourite evening rendezvous of the people in the town. A superb view of the sunset is observed by the visitors. From here, one can have a view of a projection of the Cabo Raj Niwas, and also the fort

of Aguada. By the side of the beach is a children's park donated by the Rotary Club of Panaji. On the beach is a restaurant that provides light refreshments and cold drinks. Also on the beach is a cement band-stand and two dressing rooms. The Panaji municipality provides ample sitting arrangements with multi-coloured umbrellas on the beach during the summer season. A statue symbolizing Hindu-Christian unity installed in the midst of the circle near the beach, facing the Mandovi estuary, attracts attention.

A memorial to the first Chief Minister of Goa, Daman and Diu, the late Shri Dayanand Balkrishna Bandodkar, affectionately called *Bhau* by Goans, is erected near the Children's park on the spot where he was cremated on August 13, 1973.

Dona Paula

Lying seven kilometres to the south of Panaji, Dona Paula is an idyllic and picturesque spot. A regular bus service plies between Panaji and Dona Paula. There is also a ferry service from this spot to Mormugao harbour except on Sundays and holidays, during the fair season. The place is located on a hillock specially developed as a tourist spot. The main rock can be reached by climbing a number of steps which run in a zigzag way. After the first flight of steps, is a statue tilted " Image of India " fixed on a rock with a vast expanse of the sea in the background. The statue in marmorite, done by a well-known sculptress, Baroness Yrsa von Leistner, depicts a man facing the west with his clothes caught in a *chakra*, representing the past and a woman facing the east and looking forward representing the future. On the top of the rock is a platform encircled by railing with a shed supported on pillars. From here one can have a thrilling view of the Mormugao harbour right across the river Zuari and the Arabian sea's blue expanse to the west.

Idalcao Palace or Secretariat

Once the castle of Panaji built by the Adil Shah, the Idalcao Palace was captured by Alfonso de Albuquerque in 1510. The Portuguese Viceroy, D. Jeronimo de Azevedo rebuilt it in 1615. It was used as a residence of the Viceroy of Goa from 1759. After Panaji became the capital of Goa in 1818, the palace was turned into a Secretariat in 1843. The flag post in front of the building has now become a landmark as on December 19, 1961, India's national flag was hoisted on it to mark the liberation of Goa.

Statues and Memorials

While passing the river front of the Mandovi in the town, one can have a view of a number of statues in bronze, erected at different spots. Mention may be made of a bronze statue of the famous Goan priest

and scientist, Abade Faria[1] which is erected at a very conspicuous position in the town, to the left of the Secretariat and overlooking the Mandovi river. It was installed in 1945 and is a good specimen of architecture depicting the action of hypnotising a prostrate woman. To the right of the Secretariat, a life-size bronze statue of the late Shri D. B. Bandodkar, the first Chief Minister of Goa, Daman and Diu, is seen, facing the Mandovi river. It was erected in 1976. Another statue is observed in the centre of the garden near the ferry point.' It is a bust of Menezes Braganza erected in the grateful memory of a famous Goan journalist and the champion of democratic rights. It was installed in the year 1964. A bronze statue of Francisco Luis Gomes[2], the famous Goan patriot, economist and author was erected in 1929 at Campal gardens, to commemorate the centenary of his birth. It faces the Reis Magos fortress on the far bank of the river Mandovi in a standing posture with his right hand bent towards his waist.

In the Azad Maidan, the Association of Freedom Fighters' has raised a memorial dedicated to the martyrs who embraced martyrdom for the liberation of Goa. The unveiling ceremony of the said memorial was held on Friday, March 23, 1973, at the gracious hands of Lt. General K. P. Candeth, the Commander of the Armed Forces of the Operation Vijaya who was subsequently appointed Goa's first Governor. The memorial serves as a perennial source of inspiration to the generations to come, to work and make sacrifices for the sake of the country in the great tradition of those who suffered for attaining freedom.

Cabo Raj Niwas

The Cabo Raj Niwas, the official residence of the Lieutenant Governor of the Union Territory of Goa, Daman and Diu, is located on the western

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[1] Jose Custodio Faria, popularly known as Abade Faria, the famous Goan priest-scholar-scientist, was born in the village of Candolim in the Bardez taluka on 31st May, 1756. Though he started his career as a priest here, Abade Faria left Goa in 1788 at the young age of 32 years and settled down for the remaining part of his life in France where he worked as a teacher for sometime. He then pursued the study of mesmerism which greatly interested him, and utilmately rose to the stature of being called the Father of the Science of Mesmerism. Faria was no mystifier. He gave a sound and scientific basis for the hypnotic phenomenon, and earned wide renown for his outstanding achievements in the field of hypnotism. He died in France on 20th September, 1819, i.e. at the age of 63 years.

[2] Francisco Luis Gomes was born on 31st May, 1829, at Navelim in Salcete taluka. At the age of 21, he obtained the diploma of Medico-Cirurgiao from the Medical School to which, later on, he was appointed as a teacher. He was a linguist. He was the first native deputy to be elected from Goa to the Lisbon Parliament. He staunchly defended the rights of the colonies. As a liberal, he was against the very idea of slavery. He was also an economist of international renown. He relentlessly fought against injustice. To stress the liberal principles, he wrote the novel '*Os Brahamanes*'. He also wrote a biography of the great Portuguese statesman, Marquis de Pombal, which was published soon after his death and was hailed in France and Portugal.

extremity of the district at an altitude of 40 metres above sea level. It covers approximately an area of 2,90,000 square metres, with a length and breadth of 1,075 and 270 metres respectively.

Historical Background

The idea of constructing a fortress at the spot where at present stands the Cabo Raj Niwas, was mooted in 1540 when D'Estevao da Gama was the Governor of Goa. However, the actual construction commenced a few years later. Prior to the construction of the fortress, a Chapel dedicated to the Blessed Virgin Mary under the invocation of Nossa Senhora de Cabo, which subsequently became part of the fortress was raised here. To this was attached a convent of the reformed Franciscans during the administration of the Viceroy Matias de Albuquerque in 1594. The construction of the convent was started in February 1594, and was completed in July of the same year. Of these two edifices, the latter deserves special notice. This building was selected as temporary residence of the Archbishops of Goa in the 17th century owing to its salubrity and the panoramic view of the surrounding area it commanded which one can enjoy. Subsequently the Count of Rio Pardo (1816-21), who evinced a great predilection in the Franciscans, made some improvements to the convent and was wont to spend there some months every year. After the abolishment of some religious orders in Goa, it was placed in charge of a friar and it served once more as temporary residence of the Archbishops. It was subsequently repaired by the Count Torres Novas (1835-64), and his successor Jose Ferreira Pestana (1865-70), at an outlay of about £ 1,000 and was then converted into the summer palace of the Governors of Goa.[1]

In 1635, the Viceroy Count of Linhares carried out in the same fortress a few improvements and under Royal Order dated 28th April, 1773 it was named a fortress (beacuse it was a stronghold) and it was enlarged in order to function there, the artillery class created under the same Royal Order. During the period 1779-1813, British troops were stationed in this fortress for defending Goa from an impending French invasion during the Napoleonic wars. The Britishers, during their stay in the fortress, constructed some buildings for a hospital, barracks, etc. In 1835, the followers of the cause of Bernado Peres, stationed in this fortress, surrendered without bloodshed. The buildings constructed by the Britishers were demolished by the Portuguese in 1848.[2]

The built-up area of the main building admeasures 1,435 square metres and is constructed partly in laterite masonry, partly in mud and partly with laterite boulders. The Raj Niwas has been provided with all modern

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1 *Annuario*, 1955, p. 109 note 51.

2 Fonseca, *op. cit.*, pp. 43, 44.

amenities such as electricity, piped water supply, air conditioners, sanitary units, telephones, etc.

For the V.I.P'.s visiting the territory and also for the guests of the Lieutenant Governor, a rest house has been constructed with two suites. Constructed in laterite masonry with RCC slabs and Mangalore tile roofs, both the suites are well furnished and have been provided with all modern amenities.

To accommodate a number of employees working in the Raj Niwas, seven staff quarters have been constructed in laterite masonry with Mangalore tile roofing. A separate building has been constructed to house the Office of the Raj Niwas.

In front of the Cabo Raj Niwas can be seen a well laid-out garden covering an area of about 3,150 square metres.

PARODA

Paroda (Padde), a village known in ancient times as *PARVAT*, about 11 kilometres to the south-east of Margao has a population of 964 as per the Census of 1971. It is located at 15° 12′ 45″ north Latitude and 74° 02′ 45″ East Longitude. Wells and the Paroda canal form the main sources of water supply. Agriculture is the principal occupation of the villagers and rice and fish are the staple food. Paddy is grown in the *kharif* and *rabi* seasons. Sugarcane is also grown in the village. It has three primary schools conducted by the Government. Medical facilities to the village populace are provided by a health sub-centre situated at Avedem, the neighbouring village. There is a sports club *viz.* Yuvak Sangh.

Chandranath Temple

The ancient temple dedicated to Chandranath on the flat topped hill known after Chandranath as Chandranath hill, stands about 348 metres above the mean sea level and is a famous landmark of Goa. The elegant beauty of the hill adds to the glory of the temple which attracts a large number of worshippers.

The pinnacle of the temple can be seen from a long distance from the Margao-Quepem road.

No records are available as to when the deity of Chandranath was consecrated on the hill. It may be said, however, that a number of royal families were staunch followers or devotees of Chandranath or Chandreshwar, which is an ancient deity. It appears that Chandranath was worshipped by the Bhoja rulers of South Goa at least from the beginning of the Christian era till the middle of the 8th Century A.D. They had named their capital Chandrapur after the deity. Later on, Kadambas came to power at this place in the 10th century. The Kadambas scaled this steep high mountain for meditation and spiritual solace, and in search of health

or to enjoy its haunting scenic beauty. A copper plate inscription found at Bandora, records that in the 6th century, Goa was ruled by the Bhoja dynasty[1]. It is learnt from a copper plate grant that king Chandravarman from the same dynasty donated a piece of land to a Mahavihar at Shivapur. The King Chandravarman might have built the Shiva temple in the 5th century and might have named the *Shivalinga* as Chandreshwar or Chandranath.

The temple is a beautiful stone structure containing the *shivalinga* in its inner chamber. The temple is known as Chandranath since the moon's rays fall directly on the *linga* on every full moon day. The *shivalinga* is carved in stone. The *garbhagriha* is crowned with a dome and *shikhar*. The ancient tradition of the deity is supported by 108 *tirthas* still shown on the hill. At about 100 feet below the temple there is a locality known as *sthala* where *agrashalas* of the temple are situated. Close to the temple is a lamp pillar erected on a stone pedestal.

Annually, a number of festivals are observed at the temple. The principal among them is the *jatra* held on *Chaitra Paurnima* when hundreds of devotees gather to pay homage to the Lord. There is also an ancient wooden chariot which is well known for its carvings.

Bhutnath temple

Close to the temple of Chandranath is a small temple dedicated to Bhutnath. The deity is said to be the *jagrit daivat* and is seen in standing posture, slightly bent, gazing at Lord Chandranath[2].

The Chandranath hill has become a favourite picnic spot as it is endowed with great scenic beauty. The rough flight of steps from the temple of Shankhbhairava leads upto the hill. Chandranath, the highest peak in the Salcete taluka commands a panoramic view of the surrounding places such as Margao, Sancoale, together with the factory site of Zuari Agro Chemicals, Borim bridge, beach of Betul, etc. During the night, the lights of Aguada Lighthouse are seen from this spot. The hill top is pleasant and cool throughout.

PERNEM

Pernem (Pedne), situated in 15° 43′ 00″ North Latitude and 73°48′ 00″ East Longitude, is the headquarters of the taluka bearing the same name. It is bounded on the East and on the North by the Sawantwadi taluka of Ratnagiri district of the Maharashtra State, and lies close to the left border of Tiracol, almost midway between the eastern and western boundaries of the taluka . To reach Pernem from Mapusa, one has to travel north either *via* Siolim or Colvale. From Colvale one goes to Macazana

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[1] See Chapter 2—History

[2] Naik, *op. cit.*, p. 90.

crossing a ferry and then straight along the tarred road to Pernem. The population of the town was 2.930 as per the Census of 1971. The main crops grown are paddy, *nachani*, and *udid*, besides other cereals. Three primary schools and two High Schools impart education to the town populace. Two bank branch offices of the Goa State Co-operative Bank and the Central Bank provide banking facilities to the town dwellers. The town has two clubs *viz.*, Pernem Recreational Cultural Club and Pernem Electric Club, a cinema house and a garden. A weekly bazar is held here on Thursdays.

Bhagavati temple.

Close to the market in the heart of the town stands the temple dedicated to Goddess Bhagavati. It is said to be more than 500 years old. Two life size statues of elephants in standing position made of black stone on either side at the entrance welcome the visistors. The *sabhamandap* of the temple is supported on pillars and is spacious. It leads to the inner. shrine which is supported by three pillars on each side and two pilasters. In the centre of the *garbhagriha* is the idol of the Goddess Bhagavati in standing posture erected on a raised pedestal. She is *ashtabhuja*, about five feet in height and is very imposing.

Dassara festival is celebrated in gaiety from *Ashvin Shuddha pratipada* to *Paurnima* and *Shigmo* festival from *Phalgun Vadya* 1 to 5 when a large number of people assemble.

POINGUINIM

Poinguinim (Paingin), at 14° 58′ 30″ North Latitude and 74° 05′ 30″ East Longitude, known in ancient days as *Panchaygrama*, is situated in the Canacona taluka, on the Canacona-Sadashivgad road, about ten kilometres to the south-east of Canacona the headquarters of the taluka in which it is located. It has a population of 4,435 as per the Census of 1971. Educational facilities to the village students are provided by seven Government primary schools, five middle schools and a secondary school. Agriculture and horticulture are the principal occupations of the villagers and rice is the staple food. Wells form the main source of water supply. Medical facilities are provided to the village by a maternity and a child welfare centre. There are also two family planning centres in the village. The soil in the village is rich, yielding coconut, arecanut, cashewnut, paddy and bananas. Seasonal fruits like jackfruits, mangoes, etc. are also grown in the village. It is well served by a brach post office and a consumer's co-operative society. There are two libraries *viz.*, Shraddhanand Vachanalaya and Arunodaya Vachanalaya, besides two clubs *viz.*, Galjibag Sports Club and Poinguinim Multipurpose Association, which engage in sports and cultural activities.

Parashuram Temple

Poinguinim is well-known for the ancient temple of Parashuram which is located at a short distance from the Canacona-Sadashivgad road. Constructed in a simple style it has not much architectural work of note. Unlike other temples, there is no deity or idol of Parashuram. The *garbhagriha* contains a round black stone which is venerated as a symbol of Parashuram, the sixth incarnation of Lord Vishnu. Monday is considered a special day of the deity and on every Monday the temple is packed with devotees to celebrate the same.

A number of festivals are observed at the temple, such as *Parashuram Jayanti*, *Vasant-puja*, *Navaratra*, *Dassara*, etc.

Shri Samsthan Gokarn Partgal Jeevottam Math

The Gokarn Partgal Jeevottam Math revered mostly by Gauda Saraswat Vaishnava Brahmin sect is located in the midst of fascinating natural surroundings. The place *Partgal*, in ancient days, was known as *Parvat Kanan*. The *math* has an appearance of a traditionally built structure and can be reached from the Canacona-Sadashivgad road by a narrow tarred road. From the spacious courtyard one has to descend a flight of steps to reach the *math* where stands a beautiful shrine dedicated to *Ramadeva*. Though small in size, the shrine is elegant. The door leading to the inside of the temple proper has a wooden door frame where a panel of incarnation of Lord Vishnu is visible. *Dvarapalas* in their traditional pose are also erected by the side of the entrance to the shrine. The temple contains the idol of Rama handling the bow carved in a black stone and to the left and right are the idols of Seeta and Lakshman, respectively.

At the shrine in the vicinity of the *Samsthan* of *Partgal* a number of festivals are observed throughout the year, *Ramnavami* being the principal festival which commences from *Panchami* and lasts upto *Navami*. In front of the *math*, at the entrance, a pillar is erected known as *Dhvajastambh* where some religious performance is done during *Ramnavami*. On the day of *Navami*, thousands of persons gather to witness the occasion. A number of religious performances are held here on these days. The visitors of the sect are adequately served with meals and light refreshments at the *samsthan* during the festivals. The *Samsthan* provides lodging facilities too.

Shrine of Virvitthal

The shrine of Virvitthal stands to the right of the shrine of Ramadeva within the four walls of the *math* and is revered by the devotees of the sect. The deity is the *upasyadivata* of *swami* and His Holiness carries the same wherever he goes or makes a halt. The imposing idol dedicated to Virvitthal is made of five metals holding in its hands a shell and a disc.

It is reported to have been found in the olden days in the holy river Sheela by Gokarn Mathadeesh III Shri Jeevottam Tirth[1] when he was undergoing a pilgrimage in the north.

Shrine of Maruti

Facing the *math* in the proximity of the *Samsthan* is an elegant tall structure (shrine) containing the idol of Maruti.

Partgal *math* being the headquarters of the *samsthan*, it has a number of branch monasteries spread all over India. The branch *maths* of the *samsthan* are situated at Bhatkal, Pandharpur, Gokarn, Bicholim, Rivona, Ankola, Honavar, Venkatapur, Baroda, etc. The *math* is reported to have been established by Digvijaya Ramchandra Tirth at Parvatkanana or Partgal. The *math* is a spacious structure with a number of rooms and halls besides kitchen and a store room. It has a storey where Sanskrit classes are conducted. About sixteen students are being instructed in vedas, etc. There is a *granthalaya* or library containing a number of religious books and reference publications preserved by the authorities of the *samsthan*, the benefit of which is taken by the students and the general public.

The annual income of the *samsthan* is estimated around Rs. 50,000·00 and the expenditure comes to about Rs. 46,000·00. The *math* contains a number of *samadhis* or *vrindavans* of the departed Swamijees, *viz*. Shrimat Shrikant tirth, Anand tirth, Purnaprazna tirth, Padmanabh tirth, Indirakant tirth and Dwarkanath tirth. Besides, the *samadhis* of Narhar tirth and Vyas tirth are located in the passage of the *math*.

Besides there are also temples of Goddess Durga and Vetal.

PONDA

Situated in 15° 24′ 00″ North Latitude and 74° 00′ 30″ East Longitude, Ponda (Phonde) is the headquarters of the taluka bearing the same name. Ponda is a natural route centre through which the road from the Anmod Ghat passes and bifurcates to reach Panaji and Mapusa in the north, to Margao and Mormugao in the west and south-west, and to Sanvordem in the south-east. Its nodality has now promoted industrial growth in and around this small town. It is located at about 29 kilometres to the south-east of Panaji, the State capital, which can be reached within an

[1] Swami found three images in the river Sheela when he was about to take a bath in the holy water. The first in order is the image dedicated to Bhuvijaya Vithal which was consecrated in the Gokarn *math* itself, second image *viz*. Digvijaya Vithal which was later on consecrated at the *math* of Bhatkal and the third image *viz*. Virvitthal remains with the traditional swami or *Dharmaguru*. It is said that this image was handed over by the then *swami* to his *sishya* or disciple and since then the traditional *Dharmaguru* himself performs the pujas or any other religious performance to the deity.

hour by bus. The town gets an annual rainfall of 3,557.3 mm. and the maximum and minimum temperatures are 31.4°C and 23.7°C respectively. Margao, about 16 kilometres to the south-west, is the nearest railway station to the town. The town gets protected water supply. Weekly bazaar is held on Wednesday and Saturday. Ponda is considered as a commercial and industrial centre of Goa and the major population of the town is dependent on commerce for livelihood. There are branches of the State Bank of India, Dena Bank, Bank of India, Belgaum Bank, Goa State Co-operative Bank and Goa Urban Co-operative Bank. Under the dairy and milk supply scheme, 6,000 litres of milk per day is being handled at Ponda Dairy plant during the flush season. The town has two institutions of shorthand. A number of small scale industries have sprung up in the town. Besides there are a few major industrial units such as Menezes factory of Medicine, Tyre factory, Curti Chemicals and Aero-Silicate Company. Five clubs *viz.* Lions Club, Jaycee Organisation, Youth Club and Jawahar Club Study Circle and Groupe Desportivo Viristor de Ponda, provide opportunities to the town populace to exhibit their athletic and intellectual talents. A cinema house entertains the general public.

This part of Goa offers not only physical contrast to coastal Goa but also a cultural one. While the coastlands carry a latinised landscape, this is the region of the Hindu landscape which expresses itself in the many temple shrines and the village settlements wrapping round them. Almost every house nucleus is concerned with a deity which attracts its devotees from far and wide in the rest of India. Mangesh and Shantadurga are the two leading shrines.

Educational Facilities

There are six primary schools including one Urdu school and two secondary schools. For collegiate education, the town populace has to go either to Margao or Panaji. However, the Government Engineering College is also situated at Farmagudi, at a short distance from the town.

Medical Facilities

The town has good medical facilities. It has a health centre, a nursing home, five dispensaries, two pharmacies and two hospitals.

The characteristic feature of the town is that of the Hindu temples and of Hindu institutions which almost make it the Hindu centre of Goa. A number of temples[1] are located at a short distance from the town such as Shantadurga at Queula, Ramnath, Nagesh and Mahalakshmi at Bandora, Mahalsa at Mardol and Mangesh at Mangeshi.

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[1] These temples have been described in this chapter, under their respective villages.

In the town itself, there are temples of Vithoba, Maruti, Bhumipurush, Betal and Saraswati. There is also a *masjid viz.* Safa Shahouri Masjid and a Church dedicated to St. Anne and a few statues.

Safa Shahouri Masjid

The Safa Shahouri Masjid, the biggest and most famous of the 27 mosques in the Ponda taluka was built in 1560 by Ibrahim Adilshah of Bijapur. Adjacent to the mosque there is a well constructed masonry tank measuring 30m × 30m with small chambers for dressing, with *maharab* designs. The mosque and the tank were surrounded by a large garden facing the mosque with many fountains. They were all destroyed during the Portuguese regime.

The major festivals *viz. Id-ul-Fitr* popularly called *Ramzan Id* and *Id-uz-Zuha* are celebrated at this mosque with great pomp and are attended by a large number of people.

Fort of Ponda or Kota and Mardangad

The fort of Ponda popularly known as *Kota*, appears to have been originally constructed during the time of the Adilshahi rulers of Bijapur. Dom Joao de Castro destroyed it in 1549 A.D. Shivaji conquered Ponda in May 1675 and rebuilt it. During his campaign against the Portuguese in 1683, the Maratha ruler, Sambhaji offered his prayer to this *Dargah* for success and also issued a *sanad* or grant for its maintenance[1]. *Dargah* is a structure covered with asbestos sheets and is supported on stone pillars. At present one can see a hall and an inner shrine. A deep well is also seen behind the *Dargah*. Later, the Portuguese took possession of this fort from the Marathas. Sambhaji destroyed this Fort during his fight with the Portuguese during the years 1682-84. Sambhaji constructed a new unassailable fort in the vicinity of the old fort which is known as Mardangad. The fort is now in ruins and is a favourite picnic spot.

Statues

On the main road near the bus stand is a main square in which is erected a full sized statue of Dada Vaidya, a prominant ayurvedic doctor and Sanskrit scholar. Its inauguration took place in 1961. A bust of Lal Bahadur Shastri is seen at the centre of the Municipal Garden, opposite the Ponda municipality, which was inaugurated in 1966.

PRIOL

Priol (Priyol), lying at 15° 26′ 00″ North Latitude and 73° 59′ 30″ East Longitude, is a village covering an area of 1,362.6 hectares with 5,159 inhabitants as per the Census of 1971, in the Ponda taluka, on the Panaji-Ponda road about 21 kilometres to the south-east of Panaji. The

[1] Pissurlencar P. S. S., *Portugeja-Marathe Sambandh* (Marathi) pp. 94-96.

village is composed of 14 hamlets. Educational facilities to the village populace are provided by seven primary schools conducted by the Government and two high schools conducted by private institutions. Agriculture and horticulture are the main occupations of the village populace and a few of the families are fully engaged in the sale of flowers. Priol is considered the centre of *Jayos* (jasmine flowers). Anyone passing through and halting at Mhardol is always accosted by vendors of jayos which is the traditional flower of the surrounding area. Trade may be considered as a subsidiary occupation of the people. Wells form the main source of water supply though a part of the village has been provided with tap water. The soil around the village is fertile producing rich crops of arecanut, banana, coconut, cashewnut and paddy. The secondary crops grown are seasonal fruits like jackfruit and cereals like *nachani*, etc. Adequate medical facilities are provided by two health sub-centres and three private medical practitioners. A dispensary run by the Red Cross institution gives additional medical facilities to females. There is a veterinary doctor too. There is a consumer's co-operative society and a women's co-operative society. The village has a Post and Telegraph office, a branch office of the United Commercial Bank, a library *viz*. the Janata Vachanalaya and a sports club, *viz*. Independent Cricket Club. There are two workshops *viz*. Indira Engineering Works and Libra workshop.

The village has an old tradition. Reference to Priol is found in an inscription issued during the reign of Kadamba Tribhuvanamalla in *saka* era 1021 i.e. 1099 A.D. It records a grant of 19 *niska* to Goa Nageswar of Priol from Antruja by one Naga-Devaraya who was an expert in scriptures and medicines. The inscription is issued in Sanskrit-Nagari script.

Mangesh Temple

Among the temples in and around Ponda taluka, by far the most important is that of Lord Mangesh on the Panaji-Ponda road a about 20 kilometres from the capital and nine kilometres from the taluka headquarters. The temple is considered to have been built in the middle of the 16th century and is known as the oldest temple dedicated to ' Shiva ' (Mangesh), the most influential member of the Trinity. Regarding the origin of the deity it is said that the same was shifted around 1565 A.D.[1] from Kushasthali now known as Cortalim on the left bank of the river Zuari. As soon as the Portuguese occupied Salcete and the adjoining areas, they launched a campaign of religious conversion on a mass scale. In those critical days of religious persecution, it was thought prudent to shift the deity elsewhere to a safer place. Thus, the deity was shifted from Cortalim to Priol, the present site by about 1565.

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[1] Pissurlencar, *Shantadurga Chatusshatabdi Mahotsava Granth* p. 101.

A curious origin is ascribed to the tutelar deity of the temple, Lord Mangesh. As the legend goes, Goddess Parvati the consort of Shiva, on losing a game of dice to her husband, left *Kailas* and after wandering for a long time, reached Goa, then thinly populated and with thick forests, a dwelling place of dangerous wild beasts. On her arrival at Kushasthali, Parvati saw a giant tiger which gave her the fright of her life. She then, in her distress, invoked the help of Lord Shiva exclaiming, "*Trahi Mam Girish*" (Oh ! Lord of Mountains, save me). Then Shiva presented himself on the spot and left his *linga* (phallic symbol) there, which is now known as Mangesh, a corruption of Mangirish, in its own term corrupted from *Mam-Girish*.[1]

The temple is set amidst picturesque surroundings and though small in size, its overall outline with an elegant tower, is richly endowed with elegance. At its entrance stands a gateway or *Mahadwara*, leading to a long paved corridor-like avenue lined with a few trees of religious tradition.

On entering the temple premises proper, can be seen a *dipmal* (lamp pillar) which is the characteristic trait of Hindu temples in Goa. There is a sacred tank or *talava* in another spot which is illumined with lighted *pontis* (oil cups) during the nights of certain festivals, and these luminous flames emanating from the tank, cast candescent spells and resplendent reflections in the water of the *talava*.

The temple has a spacious *sabhamandap*. In the inner shrine or *garbhagriha* of the temple is the *phallus* or *linga* fixed on a round pedestal occupying the central position. At the time of *puja* the *linga* is donned with silver or golden facial plaque (form of Mangesh) and is decorated with golden ornaments. In front of the *garhbagriha* is the stone image of Devasharma who is known as Gramapurush. To the right and left of the Mangesh are the idols of Ganapati and Bhagavati. There is also a stone image of Kalbhairava in a standing posture facing Lord Mangesh erected under the *nagarkhana* or drum chamber. The temple occupies the constructed area of 2,871 square metres and an open space of 8,886 square metres around the temple. There are *agrashalas* i.e. the residential quarters, with modern amenities that provide facilities for lodging to pilgrims and tourists.

Daily routines such as *Rudravartan*, *Rudrabhishek*, *Laghurudra*, *Maharudra*, *Maha-naivedya* etc., are performed at the temple. During nights there are held, *Shibikotsava*, *Lalukyotsava*, etc. The expenditure incurred on performing all these daily routines and functions is met from a stagnant fund erected from different sources such as subsidy, aid received from *mahajans*, devotees and general public.

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[1] *Mangesh Mahatmya* Chap III; Fonseca, *op. cit.*, p. 116; Gune, *op. cit.*, p. 13.

A number of festivals are observed throughout the year. The principal among them are *Navaratra* from *Ashvin Shukla Pratipada*, to *Shukla Navami*, *Kala-utsava* (*Gopal Kala*) on *Kartik Shuddha* 12, *Mahashivaratra* on *Magh Vadya* 14 ; amidst great rejoicings. The important festival among them is the fair of Mangesh held from *Magh Shuddha* 7 to 15 which is celebrated with all traditional pomp and glory[1].

Mahalasa Narayani temple

The other noteworthy shrine situated in the village is the one dedicated to Goddess Mahalasa-Narayani. It lies along the main road not far away from the temple of Mangesh and is situated in the hamlet of Mhardol. The ancient temple of the Goddess was situated at Verna in the Salcete taluka. The idol of the Goddess was shifted to the present temple at Mhardol after the destruction of the ancient temple at Verna by the Portuguese in 1567 A.D. The tank of the Goddess is still seen on the ancient site of the temple at Verna. It was one of the biggest temples in Salcete taluka and besides the holy tank, it had seven big wells of water which are now completely silted. Some of the structural remains of the temple are still seen on the ancient site.

The Goddess Mahalasa is said to fulfil the wishes of her devotees and is hence very popular amongst the people of Goa. The Mahalasadevi is the folk deity of *Gomantaka*, and is, therefore, worshipped with equal veneration by the people of all castes[2]. It is believed that the Mahalasa is the incarnation of Goddess Lakshmi, wife of God Vishnu and Parvati wife of God Shiva, alike.

From a regal door with a row of three arches which lies hardly few yards from the Panaji-Ponda road, one can enter the temple courtyard. Above the gate is the *nagarkhana* or drum chamber. At the right and left sides of the temple are the *tulasi vrindavan* and the traditional *dipmal* (lamp pillar) respectively, and *garuddvaja* or copper pillar in front. The temple has a spacious open *sabhamandap* supported by seven pillars on both sides, with a fine wooden terrace on the top. The wooden door leading to the inner shrine is carved with beautiful creeper designs and attracts the attention of the visitor. Next to the inner shrine is the inner *sabhamandap* which is supported by a row of four pillars each on both sides which reveals exquisits wood carvings of olden days. Other specimens of wood carvings depicting *Shakti* cult are also found in the temple. The wall of the inner *sabhamandap* is painted with the pictures of Dattatraya and Vishnu. A particular panel of wood carving in the temple showing the incarnations of the God Jagannath attracts the attention of the visitor. The floor of the *sabhamandap* is of marble and the ceiling of the *mandap* is fully decorated with creeper designs. The wooden

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[1] Naik, *op. cit.*, pp. 21-24.

[2] Gune, *op. cit.*, p. 19; Gune, *Shri Mahalasadevi Upasana* in *Shri Mahalasayana* ed. by V. V. Khedekar, Mhardol, Ponda, Goa, 1968 pp. 1-13.

images of *dvarpalas* (door keepers) are erected near the door leading to the *garbhagriha*.

In the *garbhagriha* is the splendid image of the Goddess Mahalasa-Narayani which has a close affinity to that of Mahalasa or Bhairavi, the consort of the folk-God, Khandoba. It is believed that she is Narayani the form of Lakshmi, wife of Vishnu. The incarnation of Vishnu, the creator of Hindu *Trimurti* is now venerated at Mhardol under the invocation of Mahalasa[1].

By the side of the main edifice is the shrine containing the images of Shanteri and Lakshmi-Narayan of lesser importance. The ancilliary deities and a spacious water tank are to be seen at the back of the temple. To the left of the temple there is a two-storeyed bungalow and to the right are the *agrashalas* which provide lodging facilities to the visitor.

A number of festivals are observed at the temple, the main among them being the *Vijayrathotsava* popularly known as Mahalasa *jatra* and *Kojagiri Paurnima*. The *Vijayrathotsava* festival is celebrated with great pomp from *Vaddhya* 5 to 10 when thousands of devotees, Hindus as well as Christians, gather to pay homage to the Goddess. The festival second in importance is *Kojagiri,-paurnima* which is attended by thousands of people. The *Kojagiri-paurnima*, the day of the full moon in Ashvin, is celebrated amidst great rejoicing on *Ashvin Shuddha* 15. During the festival a number of programmes are held such as *Lakshmindrapuja, purana, bhajan,* procession of the image of Goddess on a decorated wooden elephant, etc. Besides this, *Sharada Navaratra* is also celebrated from *Ashvin Shuddha* 1 to 9 when the temple is packed with innumerable programmes. In the month of September, the *Jayachi-puja* (worshipping the Goddess with jasmine flowers) is performed at the temple with great celebration. A trust of flower vendors manage the function.

QUEPEM

Located in 15° 12′ 45″ North Latitude and 74° 04′ 15″ East Longitude, Quepem (Kepe) is the headquarters of the taluka bearing the same name. It is said that the original kingdom of the Kadambas was in the south of Goa in *Chandramandal* i.e. Quepem. It lies about 48 kilometres to the south-east of Panaji, the district headquarters and has a population of 2,925 according to the census of 1971. Sanvordem, the nearest railway station to the town, is situated at a distance of 7 kilometres. The town

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1. According to a legend ascribed to the deity, after a universal deluge, Gods and *asuras* (demons) trying to salvage their belongings, found a jar of *Amrut* (nectar of immortality) and fought between themselves for its possession. In the thick of the fight, Vishnu appeared in disguise as a beautiful woman 'Mohini' who offered to mediate between the warring hosts. Cunningly, she gave the nectar first to the Gods until she exhausted the jar which made them strong and immortal. Thus the demons were defeated and the Gods became the masters of heaven. Mohini, the feminine form of Narayan came to be known as Mahalasa Narayani.

receives an annual rainfall of 3,451·9 mm. while the maximum and minimum temperatures are 34.3°C and 18.3°C respectively. The weekly bazaar is held here on every Sunday, the principal commodities sold being dry and fresh fish, vegetables and utensils, etc. The average volume of turnover comes to Rs. 2,500.00. There are in the town, a primary school and two scondary schools. Medical facilities to the village populace are provided by a health centre. There is a sports club *viz.*, Quepem Youth Association. Datta Mandir and the Chandreshwar shrine are the objects of interest in the town.

QUERIM

Querim (Keri) (15° 27′ 30″ North Latitude and 74° 00′ 00″ East Longitude) is situated at a distance of about nine kilometres to the north of Ponda, the headquarters of the taluka bearing the same name and the nearest town. The village can be reached from Mhardol (Priol) by bus. It has a population of 2,755 as per the Census of 1971. Education facilities to the village populace are provided by four primary schools conducted by the Governement. Wells form the main sources of water supply.

Vijayadurga temple

The temple dedicated to Goddess Vijayadurga stands in the midst of picturesque surroundings. At the entrance of the *sabhamandap* is the *nagarkhana*. The *sabhamandap* leads into the *chowka* supported on four pillars and two pilasters each on both sides. At the extreme end of the *chowka* are niches in the wall containing the idols of *dvarapala*, one on each side. The idols are a good specimen of workmanship as they are carved in one block of black stone. The *garbhagriha* contains a black stone idol of the Goddess Vijayadurga which is placed in a wooden canopy plated in silver. It is said that after killing a demon by name Kalantak, the Goddess Durga obtained the title Vijayadurga (of success) from *rishis* or saints. Now one can see the idol of the Goddess Vijayadurga in the form of *Mahishasurmardini.*[1] It is reported that the deity was brought from Sancoale in the Mormugao taluka, during the days of religious persecution and consecrated at the present site.

A fair on *Margashirsha Shuddha* 10, is celebrated at the temple every year.

QUEULA

Queula (Kavale) formerly known as *Kapilgrama* lies at a distance of 2.5 kilometres to the west of Ponda, the headquarters of the taluka in which it is located. It is noted for the famous temple of Shantadurga. It has a population of 5,697 as per the census of 1971 covering an estimated

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[1] Gune, *op. cit.*, pp. 19, 20.

area of 1,025.9 hectares. The village is located at 15° 23′ 30″ North Latitude and 74° 00′ 00″ East Longitude. Five primary schools and a middle school cater to the educational needs of aspiring students. Besides there are two high schools, and a Sanskrit Pathashala. Medical facilities to the village populace are provided by the primary health sub-centre located in the village and private medical practitioners. Though tap water has been provided to the village, wells form an additional source of water. There is a consumer's co-operative store and a milk dairy. There is a sports club *viz.* Shanta Cricket Club, which also maintains a library known as Dnyana-Dip Vachanalaya.

Shantadurga Temple

Set amidst bountiful natural surroundings, the temple dedicated to Goddess Shantadurga located by the side of the road attracts the attention of tourists and passers-by. It is sumptuously built and is considered as an excellent piece of architectural design and sculptural beauty. It faces the east. Shantadurga means the Goddess of peace which appears to be her Puranic name. She is venerated by the people as *Jagadamba* who according to Hindu Mythology appeared in the midst of the grim duel between Shiva and Vishnu, on the command of Brahma, and separated the fighters. Since then she is known as mediatrix—Shantadurga or Goddess of Peace. That is why one can see the image of Shantadurga in between Shiva and Vishnu in the temple. Shantadurga or Shanteri is worshipped practically in every village of Goa. Images of Shantadurga are often worshipped before *varulas* or ant-hills and her worship seems to be of local origin and hence the temple is considered as one of the most important temples in Goa.

The original place of Goddess Shantadurga is said to have been Trihotrapur or Tirhut in Bengal. On the arrival of the Aryans, who were the worshippers of the Goddess in Goa, they brought the deity and established it at Kardalipur or Quelossim in the Mormugao taluka. The ruins of this small temple including a lamp pillar and a tank can be seen at Quelossim even now. The ancient temple was rebuilt by one Anu Shenvi in the beginning of the 16th century. The temple was badly damaged and burnt by the Portuguese in 1567. The tutelar deity was shifted from Quelossim to Queula, where a small temple was constructed in 1567.

The temple at Queula is reported to have been built during the reign of the Maratha ruler, Shahu Raje of Satara at the request of Naro Ram Rege Mantri, one of his ministers in 1738 A.D. He took personal interest in the construction of the temple as it was his family deity. At the request of Naro Ram, the revenue of the village of Queula was granted by Chatrapati Shahu to Goddess Shantadurga, for the maintenance of the temple in 1739.

The temple can be reached by passing into a huge gate on which is erected a *nagarkhana*. It has a courtyard encircled by a compound wall. At the entrance is a *dipastambha* which attracts attention. Leaving the lamp pillar one can enter the entrance room which is followed by a large *sabhamandap* and a *garbhagriha*. Interior decorations on the pillars and panels of the *mandap* are rich and beautiful. The temple has a marble floor. The ceiling of the *sabhamandap* is decorated with beautiful designs and from there are hung chandeliers (glass *zumbaras*) in different designs. The door leading to the inner room is silver plated. The *garbhagriha*, though small, is elegant and is crowned with a massive dome from the outside. It contains an idol of Shantadurga in a sitting position, under a silver canopy. The idol of Shantadurga is divine and beautiful. There is also a *shivalinga*. To the north of the temple is a structure where an image of Narayan is placed. By the side is seen a shrine of Ganapati. Besides this, there is an image of Bhagavati under the *parijat* (coral-night flowering jasmine) tree and there is an idol of Kshetrapal near the lamp-pillar. In front of the temple of Shantadurga, by the side of the road, is a spacious *talav* or tank for ceremonial ablutions.

By the side of the temple are the single storeyed modern buildings (*agrashalas*) which provide lodging facilities to visitors.

From *Magha* 1 to 7, a fair is celebrated when people from far and wide assemble in thousands to witness the occasion.

Navaratra is also celebrated at the temple. During the occasion the idol of the Goddess is placed in a decorated *Makhara*. It is customary that the deity is draped in rich clothes which are changed according to various festivals.[1]

Kapileshwar Temple

The temple dedicated to Kapileshwar is situated in the hamlet of Kapileshwari by the side of the road. It is said to be about 700 years old. The *garbhagriha* contains a *shivaligna* which is believed to be *svayambhu* (self-existant). It is said that the *linga* at Kapileshwari was formerly known as Kamleshwar as the shrine was surrounded by a tank in which plenty of lotus flowers were grown. With the passage of time, the tank got dry. The King named Kapil, rebuilt the temple and since then the *linga* became popularly known as Kapileshwar.

The most important festival is *Jatra* which is celebrated from *Kartika Vadhya 14 to Margashirsha Shuddha 3*.

Shri Gauda Padacharya Math

Shri Gauda Padacharya *Math* revered mostly by *smarth* sarasvat brahmins, is also known as Kaivalyapur *math* (Kavale *math*) and is located

[1]Naik, *op. cit.*, pp. 17-20; Gune, *op. cit.*, p. 19. See Pissurlencar, *Shantadurga Chatusshatabdhi Grantha*, Bombay 1966 for detailed information.

at a short distance from the Shantadurga temple. The prelate of Shivaites or *smarthas* known as *svami* or lord, has his main monastery or *math* at Kavale where he usually resides. Shri Gauda Padacharya *Math* has its headquarters at Queula and the disciples of the *math* are spread all over India.

The *math* is said to have originally been founded at Kushasthali near Quelossim but was later on shifted to its present site.

During the days of religious persecution started by the Portuguese, the ancient math located at Kushasthali was totally destroyed in saka 1486.[1] The important records dealing with *Samsthan* were burnt by the Portuguese. The *svamis* took shelter at Golwan and Chinnar, and subsequently settled at Varanasi, the holy place of pilgrimage. With the passage of time, religious freedom was granted by the Portuguese to the people and peace was restored. The Brahmins from Goa then felt the need for a *svami* and requested the disciple of Shrimat Sadananda Svami (61st.) Shrimat Madbhavanand Svami, the traditional *Dharmaguru* who was residing at Varanasi to establish a *math* at Goa, in the proximity of Shantadurga temple. Then, Shrimat Madbhavananda Svami sent his disciple Shrimat Satchidanand Sarasvati (63rd) to Goa bestowing on him all the traditional rights to undertake the work. The *math* was established by him in the year 1600. The present chief of Kavale *math* is Shrimat Satchidanand Sarasvati (77th).

The *math* was constructed in the year 1925 in the midst of a picturesque landscape. It is a one-storeyed plain structure with fine gallery and a tiled roof. It has spacious halls and a number of rooms and kitchen provide facilities to the visiting members of the sect. The *math* has been provided with electricity and also with piped water.

The *math* contains the *samadhis*[2] of Shrimat Purnananda Sarasvati, Ramananda Sarasvati, Atmanand Sarasvati, Shivananda Sarasvati, etc. There are in all six *samadhis* in the *math*. The *samadhis* have vaulted domes. The *math* has a shrine containing black stone idols of Vithoba, Rukhmini and Rahi. Besides this, there is a shrine dedicated to Bhavani-Shankar in whose honour *pujas* are performed by *svami* himself. The yearly income of the *math* is estimated at Rs. 1,00,000·00 approximately. The built up area of the *math* is about 900 square metres.

Celebrations are held on *Ganesh Chaturthi* and *Ramnavami* when numerous devotees assembly at the *math*.

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[1] Late Ramachandra Vaman Nayak Karande Shastri, *Shri Samsthan Kaivalyapur Mathacha Itihas*, published in Sake 1832 (1910 A.D.).

[2] When a Swami dies, he is said to have given up his soul to the Creator, or in other words the *swami's* soul is identified with the universal soul. His corpse is not cremated but buried with full honours and a monument or edifice is erected over his grave and is known as *Samadhi* or *vrandavana*.

RAIA

The village Raia (Raya) is situated at a distance of 41 kilometres on the way from Panaji to Margao, in the Salcete taluka, on the left bank of the river Zuria. The village is linked to Panaji by a tar road. Its population is 6,268.

Rice is the main agricultural produce of the village. There are a large number of coconut gardens and the place is thus situated in a most beautiful natural surrounding. The main objects of special interest are Fortress of Rachol, Church and Seminary of Rachol.

Fortress of Rachol

It is situated on the left bank of the river Zuari opposite the village Siroda in the Ponda taluka. It was the main bulwark of defence in Salcete and was constructed long before the occupation of Salcete by the Portuguese in 1543. It was frequently attacked by the Muslim rulers of Bijapur and later on the Marathas and was repaired in 1604 and 1684. The following inscription on the gate of the fortress, belongs to the period when Sambhaji, the Maratha ruler had occupied Salcete: "The Count of Alvor being Viceroy of India caused this Fortress to be repaired after its defence from the siege of Sambhaji 22nd April 1684"[1].

After the Maratha campaign against Goa of 1740, it was again repaired by the Marquis of Alorna in 1745. It was defended by more than 100 guns which were reduced to 65 in 1832. Most of the ancient buildings from the Fortress have disappeared and the Parish Church and Seminary and its Church have alone escaped destruction.

Church of Nossa Senhora das Neves

This was the first chapel in Salcete where Mass was celebrated by the Jesuits in 1566. It was converted into a Church in 1576 and dedicated to *Nossa Senhora das Neves*. It was expanded and rebuilt during 1584-96. It has five altars.[2]

Seminary and Church of Rachol

The Rachol Seminary was originally established at Margao in 1574. During the campaigns of the Adil Shahi rulers of Bijapur in 1579 it was completely destroyed and was removed to Rachol in 1580. Again it was shifted to Margao but subsequently retransferred to the site at Rachol where now it is seen and the foundation stone of this building was laid down on 1st November 1606 under the auspices of King Dom Sebastiao whose portrait on horseback is seen in the main room called after his name. It functioned as a College while under the supervision

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[1] Fonseca, *op. cit.*, p. 45, English translation of original in Portuguese.

[2] *Annuario*, 1955 p. 134.

of the Jesuits till 1762 and conducted classes for teaching theology, Portuguese and local languages etc. The college of Rachol grew next in importance to the College of St. Paul at Goa during the 17th century. Attached to it was a printing press. After the expulsion of the Jesuits from the Portuguese dominions, it was converted into a Diocesan Seminary for the education of the cleargy.[1] The Seminary has a rich library.

The building of the Seminary is lofty and vast in area and has little turrets on the roof. It consists of large number of rooms which are used by the students and the boarders. On the walls of the several long corridors are seen beautiful paintings.

The Church dedicated to St. Ignatius of Loyola, founder of the Society of Jesus, is attached to the Seminary. There is also a chapel of the Holy Ghost. Over the pulpit of the refectory is a painting of Venerable Fr. Joseph Vaz who was the Superior of the Oratorians in Goa during the latter part of the 18th century and died a holy death in Candy. The vestry of the church is vaulted and contains many beautiful paintings.

REIS MAGOS

Reis Magos (15° 30′ 00″ North Latitude and 73° 48′ 15″ East Longitude) is situated on the opposite side of Panaji across the river Mandovi, standing like a historical landmark pregnant with traditional significance. Reis Magos means the Magi or kings to whom the place is dedicated. The place comes under the panchayat jurisdiction of Verem in the Bardez taluka. Agriculture is the main occupation of the villagers. Paddy is the principal crop grown in both *kharif* and *rabi* season. Fishing is also carried on along the riverside. Wells form the main source of water supply. Banking facilities are provided by two branch offices of the Syndicate Bank and Dena Bank. There are two Government primary schools and a high school conducted by a private institution, which caters to the educational needs of the village populace. It has a fair price shop and a consumer's co-operative society.

This is the place where the Holy Mass was celebrated for the first time in the province of Bardez, by the Franciscan Friar Joao Noe, in 1550. In the same year, Noe built a Church over the ruins of a Hindu temple in Verem under the invocation of Reis Magos which thus became the first church in Bardez. The Franciscan Missionaries then instituted the first school adjoining the Church.

Reis Magos Fort

To the right of the church on the top of the hill is a fort constructed during the term of office of Viceroy Don Afonso de Noronha in 1551

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[1] *Ibid.*, p. 34.

and enlarged subsequently by Don Francisco da Gama. It was finally re-erected in 1704 by Caetano de Mello e Castro,. Portuguese Viceroy, as is visible from an inscription on its gate. Before the construction of the fort there were ruins of a small fort of the time of Adilshah, the Sultan of Bijapur. The Governor General Manual de Souza Coutinho (1588-89) added to the fortification seven casemates or underground vaulted chambers each one with 124 steps in the interior of the parapet.[1] About a century ago, Madhav Rao, the Raja of Sawantwadi stayed in this fort when he came to Goa on a State visit with a retinue of 1,500 men, 1,000 horses and 4 elephants.

Though small in size, the fortress commands a splendid view around· From here one can see the Aguada Fort, Miramar Beach, Cabo fortress and an expanse of sea. It was defended by 33 guns and had accommodation for a small garrison. However, the visitor can see only nine cannons at present. On the fort there was also a semaphoric post for transmitting the signals from Aguada to Mali, but this post was transferred from Reis Magos to Cabo by Viceroy Count of Antas and was replaced by a lighthouse. The fort is in a good state of preservation and is being utilised at present as a jail for short-term criminal prisoners. The office of the jailer is also located in the fort.

Towards the east, at a little distance from it, flows a perennial spring with abundance of potable water, while at its base rises the Church of Reis Magos ascended by a beautiful flight of steps.

Church of Reis Magos

The church of Reis Magos is located in the midst of palm groves at the foot of the fort. It is dedicated to the Three Wise Men of the East, namely Gaspar, Baltazar and Melchior. It is reported that this edifice was built on the ruins of a pagoda dedicated to Vithoba in 1550 by the Franciscans, with the sum allotted to them by the Government. Built in an attractive style, the church has a superb frontispiece, though worn out, bearing some royal arms and other antiquities. Seven Portuguese Viceroys and Governors were buried in the church as may be seen from the commemorative slabs. It is reported that some Viceroys used to take the oath here before assuming their office. On the main altar of the church under the invocation of the 'magi', there is an imposing tabernacle supported by the Four Evangelists. The pavement is dotted with inscriptions, the most important of which, found in the sanctuary, indicates the spot enclosing the remains of Dom Luis de Athaide, Count of Athoughia, who twice held the office of the Viceroy of Portuguese India. In the church is celebrated annually on the 6th January, the feast of the Epiphany or Reis Magos, with great pomp, and near it is

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[1] Fonseca, *op. cit.*, pp. 44-45.

held a popular fair. In the olden days, the fair was held within the walls of the fort which is located by the side of the edifice and was attended by the Viceroys and Archbishops. Side by side with this sacred church stood the college of the Franciscans, now in ruins, where the Viceroys resided for a while on their arrival in Portuguese colonies in India, previous to assuming charge of their office.[1]

RIVONA

Located at 15° 10′ 00″ North Latitude and 74° 06′ 30″ East Longitude, on the bank of the river Kushavati, Rivona (Riveur) is largely an agricultural village in the Sanguem taluka about 22 kilometres to the south of Sanguem. Chiefly producing rice, arecanut, coconut, etc. it has a population of 2,934 as per the census of 1971. Agriculture is the major occupation of the villagers though a part of the population is engaged in mining. It has four primary schools, three high schools, a health centre and a dispensary. Drinking water is obtained by the village populace from the wells, fountain, river and tank. It has two libraries, one by name *Utkarsh Vachanalaya* and the other a panchayat library run by Government aid. The village is well-served by a post office and branch office of the Central Bank of India. Cultural activities are conducted by two clubs *viz.* Sanmitra Sports Club and Zambaulim Youth Club.

According to local tradition, the word *Rishivan* i.e. Rivona seems to have been derived from the dwelling place of sages. Lord Ramachandra, the hero of *Ramayan* is said to have crossed the place Rivona on his way to Lanka. The place is known as Pandavas plateau and there are beautifully carved caves attributed to them. There are also signs of the place where the pandavas used to perform their *yadnyas.*[2] Recently, a stone image of Buddha in *Bhumisparshamudra* was discovered on the ancient site opposite the caves, which may be ascribed to the 8th century A.D.

The village is known for the temples dedicated to Damodar, Vimaleshwar, Shantadurga (Kolamb) and Maruti.

Damodar Temple

The magnificent temple dedicated to Lord Damodar stands in the hamlet of Zambaulim and is considered to be *jagrit daivat* and is venerated by all castes from in and out of Goa. It was originally founded in the Mhaddo ward of Margao. Due to the temple destruction campaign started by the Portuguese rulers in Salcete in the year 1567, the local deities from Margao, *viz.* Ramanath, Damodar, Lakshmi-Narayan,

[1] Fonseca, *op. cit.*, p. 45; and Telles R. M. *Monumentos Nacionais-Igreja e Colegio dos Reis Magos* in *OP* Nos. 1 to 3 of 1932 pp. 76-92.

[2] *Smaranika* of Shri Damadar *Samsthan*, Zambaulim, Goa.

Chamundeshwari Mahakali, Mahesh, etc. were shifted to Zambaulim[1]. The Desai's of Rivona helped the *mahajans* and gave them land adjoining the Kushavati river for the construction of temples. In 1885, the *mahajans* decided to reconstruct the temple as it was found to be very old and unsafe. After building a new temple at the present site, the images of Damodar and Lakshmi-Narayan were reinstalled there. In 1951, the double-storeyed *agrashalas* were constructed providing decent accommodation to visitors. In 1966, the new *sabhamandap* was built and in October 1972, the main temple of Damodar was reconstructed.

The outer *sabhamandap* is a specimen of modern architecture which leads into the *Antaralaya* or inner hall supported by six white marble stone pillars each on both sides. The floor of the *antaralaya* is paved with white marble tiles. Then, there is a small room which leads into an inner chamber which is divided into two compartments. The inner chamber contains and idol of Lakshmi-Narayan made of black stone and a stone *linga* dedicated to Damodar on a raised *pindika*. Facing Damodar is a stone image of *nandi* in usual sitting posture in the *antaralaya*. It is carved in one block of black stone.

Holi, in *Phalguna-Shudda Paunima*, and *Shishirotsav* in *Phalguna Vadya*, are celebrated in all traditional glory.

SALIGAO

Saligao (Salgaon), with a population of 4,033 as per the census of 1971, is a village in the Bardez taluka about eleven kilometres to the north-west of Panaji and about six kilometres to the north east of Mapusa. It is located at 15° 32′ 15″ North Latitude and 73° 47′ 30″ East Longitude. The village is composed of nine hamlets occupying an area of 598·2 square kilometres. Wells and fountains from the sources of water supply. Agriculture is the principal occupation of the villagers and paddy is the main crop grown. Besides, onions, chillies, beans, water melons and sweet potatoes are also grown in the village. Educational facilities to the village students are provided by a primary school and two secondary schools. Besides four private medical practitioners, the village has a sub-health centre and a nursing home for the old and disabled persons. A shopping and marketing centre constructed by the *Grampanchayat* is located in the village. The village has a seminary, two sports clubs *viz*. Saligao Sporting Club and Saligao Youth Club and a post and telegraphs office.

Church of Mae de Deus

A *kuchcha* road studded with palm groves leads to the compound of the Church dedicated to Mae de Deus, encircled by a compound wall. The foundation stone of the Church was laid on February 2, 1867, by the

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[1] Naik N. B. *Gomantakiya Devalaya*, Rivona, Goa, p. 99.

Vicar General of the Archdiocese, Canon Joachim Antonio de Rosario commissioned by the Archbishop Amorim Pessoa.

The church is built in Gothic style and is one of the most beautiful churches in Goa. Two lofty bells are seen hanging in the tower. Facing the church in the courtyard adjacent to the compound wall are two beautiful statues of Our Lady of Fatima and Mae de Deus on a cement concrete pedestal.

Saligao Seminary

The Minor Seminary of Saligao also known as Our Lady's Seminary, is a religious institution located on a hillock close to the village. It can be easily approached by a good motorable road.

The Seminary dedicated to Our Lady is a majestic structure, having spacious halls, lecture rooms, dormitories and a small chapel therein. The foundation stone of the Seminary was laid in the year 1937. Its construction was completed in 1952, and was blessed during the same year. While entering the Seminary, a commemorative plaque to that effect can be seen inscribed on the wall.

The Minor Seminary, is purely a religious institution run by priests, wherein a number of students are imparted education during the preliminary stage for the priesthood. At present there are 110 students enrolled in the Seminary. After the completion of the preparatory course for priesthood, the students are sent to the Rachol Seminary in Salcete for further studies.

SANGUEM

Located at 15° 13′ 30″ North Latitude and 74° 09′ 00″ East Longitude, Sanguem (Sange) was known as *Samgampur* in the olden days. It is the headquarters of the taluka bearing the same name. It lies about sixty kilometres to the south-east of Panaji, the district headquarters and has a population of 5,006 according to the Census of 1971. It is a municipal town covering an area of 5·40 square kilometres. The town gets an annual rainfall of 3,825·2 mm. and the maximum and minimum temperatures are 34·3°C and 18·3°C respectively. It is connected with the neighbouring places by *pucca* as well as by *kuchcha* roads and with the Belgaum city by a fine motorable road. Sanvordem is the nearest railway station and is situated at about seven kilometres to the south of Sanguem and can be reached within an hour. The bazaar days here are Sunday and Wednesday, when a number of commodities are sold. The town has good facilities for education. There are six Government primary schools and two secondary schools which are subsidised by the Government. It has a hospital consisting of twenty beds which gives medical aid to the sick. It has an open surface drainage sewage system.

The town imports rice, wheat and sugar and exports coconut, arecanut and cashewnut. It has a hospital consisting of twenty beds which gives medical aid to the sick. It has a branch office of the Union Bank of India, a library and a club *viz.* Sanguem Youth Association Sporting Club.

Sangameshwar Shrine

The shrine of Sangameshwar is, as its name suggests, close to the *sangam* or confluence of the two rivers, *viz.*, Zuari and Kushavati. The shrine contains a small sized *Shivalinga*. *Mahashivratra* is celebrated here. Since the shrine is in the river bed, it is submerged during heavy showers.

Church of Our Lady of Miracles

The church dedicated to Our Lady of Miracles stands in the heart of the town. It was constructed in 1763. It was repaired in 1857 and elevated to a Church and dedicated to Our Lady of Miracles in 1858.

A feast is celebrated here on the last Sunday in the month of May.

Jumma Masjid

Built in the last century, the Jumma Masjid was completely renovated in 1959. The new structure, greatly enlarged and embellished, is remarkable for its harmonious proportions and elegant simplicity. It has four minarets whilst the entrance facade is flanked by two elegant turrets surmounted by pillared kiosks. A dome shaped kiosk rises in the centre of the four minarets adding a characteristic note to the impressive styling of this mosque. The expenditure of the *masjid* is met by the contributions received from the businessmen of the sect.

Shabe-Kadr and *Shabe Barat* are the main celebrations held at the *masjid*.

SANQUELIM

Sanquelim (Sankhali), a large village, lies at 15° 34′ 00″ North Latitude and 74° 00′ 45″ East Longitude. It is located at a distance of seven kilometres from Bicholim, the nearest town and the taluka headquarters. The village consists of ten hamlets, covering an area of 41.2 hectares. Coming under the *panchayat* jurisdiction of Sanquelim-Arvelem, the total population of Sanquelim is 3,166 according to the census of 1971. It has an area of 200 hectares under cultivation producing rice, *nachani* and *udid* (black gram), coconut is also grown in plenty. Wells and rivers form the sources of water supply although a part of the village has been supplied with tap water. There are two primary schools, a secondary school and a middle school imparting education to the students. Medical facilities to the village populace are provided by a health centre. A weekly bazaar is held at Sanquelim every Monday, the benefit of which

is taken not only by the villagers residing at Sanquelim, but by all the people from the surrounding areas. The village has a fish-market, a *kaju* factory, and an ice-fruit lollipop factory. It has a library, a cinema theatre and two clubs *viz.* Yuvak Sangha and Eagle Sports Club. It is well served by a post and telegraph office and a bank. The village is richly endowed with mineral resources.

Datta Mandir :

The magnificent temple dedicated to Lord Dattatreya is situated near the bazaar close to the road and is reported to have been constructed in 1882. The temple is well-maintained and is rich in design and sculptural beauty. The *chowka* of the temple is fully decorated with photographs of Lord Datta, in different poses. The *garbhagriha* contains the idol of Dattatreya, carved in white marble, in its usual three-faced form. The place is known as *Dattawadi* and is considered to be a scared place as divinity, blessedness, peace and beauty abide in the temple.

Datta-Jayanti is celebrated in *Margashirsha* at the temple with all rituals.

Vitthal Temple :

The second noteworthy temple in the village is located by the side of the road quite close to the Datta Mandir and is dedicated to Vitthal. The earliest reference to God Vitthal of the temple is found in a grant of sake 1410/A.D. 1488 made by Jaitaji, Dipaji and Satroji Rane for the worship of the God. The place is mentioned as Vithalapur[1]. The old temple[2] was built by the Rane Sardesai family of Sanquelim and was reconstructed afterwards by the Raja of Gwalior, the grandson of the Rane Sardesai. Vitthal is the God of Rane's ancestors who had put up prolonged memorable resistance to the Portuguese rule. In appearance, the temple presents a formidable object of Sanquelim and is worth a visit as a specimen of modern North Indian temple architecture in Goa.

The temple is surrounded by a compound wall and is divided into two halls and an inner shrine. The idols of Vitthal, Rukmini and Satyabhama in the sanctuary, engraved in hard black stone, are three feet in height approximately.

Ashadha and *Kartika Paurnima* are the important festivals celebrated at the temple.

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[1] *Prerana* monthly of October 1964, Ed. by Kelkar R. N., Assagao, Goa.

[2] A lengend about the deity goes that a devotee of Vitthal from the family of the Rane Sardesai of Sanquelim used to visit Pandharpur every year to pay his homage to the Lord. Due to the old age he could not go to Pandharpur and regretted the same. Lord Vitthal of Pandharpur then presented Himself at Sanquelim in order to give *darshan* to his beloved devotee. Hence, a temple was erected and dedicated to Lord Vitthal at the spot.

Radhakrishna temple

Radhakrishna temple contains the beautiful idols of Radha and Lord Krishna engraved out of marble stone. The festival of *Gokulashtami* is celebrated at the temple.

Sanquelim Math

The branch *math* of Queula of Ponda taluka is also situated in the village, containing a *samadhi* of *Swami* Purananauda Sarasvati. The expenditure of the *math* is being met by the income received from the land given by the family of Rane as also aid received from the Queula *Math Samsthan.*[1]

SIRIGAO

Sirigao (Shirgaon), village (15° 36′ 30″ North Latitude and 73° 53′ 45″ East Longitude) is situated at a distance of about six kilometres to the north-west of Bicholim, the headquarters of the taluka bearing the same name, and the nearest town. The village is also linked with Assonora in the Bardez taluka. It is composed of three hamlets with a population of 1,428 as per the Census of 1971. Educational facilities to the village populace are provided by a primary school and a middle school conducted by the Government. Wells form the main source of water supply. Rice is the staple crop grown in the village. It has a branch post-office and two sports clubs by name Yuvak Sangh and Victory Club, and a library. Agriculture forms the main occupation of the population. However, the village is richly endowed with iron ore and a number of persons are employed in mining activities.

Lairai temple

Lairai temple is an excellent temple in the vicinity with a spacious *sabhamandap* built in the modern style of architecture, and admeasures 258 square metres. The *mandap* leads into another *sabhamandap* where an idol of Ganapati carved in marble is placed under a wooden canopy. The *garbhagriha* contains a marble pedestal over which is erected a silver canopy containing a dazzling *kalash* (pot) dedicated to Goddess Lairai. The deity is considered as *jagrit devata* and the people all over Goa worship her with great veneration.

A considerable congregation of nearly ten thousand people from all over Goa assemble for the jatra on *Vaishakha Shuddha Panchami* to pay their homage to the revered Goddess. The temple assumes a gay and festive mood for about five days. On the day of *panchami*, the temple is packed with a number of religious programmes and at the midnight devotees of the Goddess, popularly known as *Dhonds*, walk on live coals.[2] To witness

[1] Shri Shantadurga *Chatus-shatabdi Mahostava Grantha* edited by Dr. P. S. Pissurlekar, p. 143.

[2] Naik, *op. cit.*, pp. 65-66.

this unique scene, which is a special attraction in Goa, a large crowd gathers near the *pipal* tree. This fair is considered as one of the most important fairs in Goa and a number of traders exhibit their wares for sale. The shopkeepers of brass and copper vessels figure prominently here. Transactions to the tune of Rs. 50,000·00 take place on the occasion. A large number of cold drink stalls serve the visitors during the fair.

SIRODA

Siroda (Shiroda) at 15° 19′ 30″ North Latitude and 74° 02′ 00″ East Longitude, with 9,322 inhabitants as per the Census of 1971, lies ten kilometres to the South of Ponda, the headquarters of the taluka bearing the same name. The village is known for its temples, the chief among them being the one dedicated to Goddess Kamakshi. Siroda is considered to be the biggest village in Ponda taluka and is composed of 27 hamlets. There are in all 19 Government primary schools, a middle school and two secondary schools which provide educational facilities to the village populace. Wells form the main source of water supply to the village populace. Medical aid is provided to the villagers by a primary health centre and a sub-centre, besides two private medical practitioners. There are two co-operative societies, one consumers' co-operative society and a milk society. Though agriculture is the main occupation of the majority of the populace, about 60 to 70 persons are engaged in toddy tapping. The village has a post office and four clubs *viz.* Yuvak Mandal, Janata Sports Club, Sancrem Social Club and Siroda Sports Club. The weekly bazaar is held every Tuesday, the benefit of which is taken by about twenty villages in the neighbourhood.

A copper plate grant belonging to about the 5th or 6th century A. D. and issued by the King Chandravarman of Maurya dynasty refers to a place Shivapur. It is surmised that the modern Siroda might have been known as Shivapur during ancient times.

Kamakshi Temple

Of the objects of interest from the point of beauty and magnificance, the temple dedicated to Kamakshi is the greatest attraction in the village and draws a number of devotees and tourists. As per the local tradition, the main deity is said to have been brought from Karwar in the Karnataka State. The temple is supposed to have been constructed about 400 years back. It faces the east and is splendid and towering. It has four minarets and on the main shrine is the *shikhar* (pinnacle) plated with gold which attracts the visitor.

A huge and massive gate leads into the spacious *sabhamandap*. In the courtyard near the entrance is a lamp-pillar or *dipmal*. The inner hall or *chowka* is supported by a row of three solid wooden pillars each on both sides, bearing exquisite carvings. In the inner hall, beautiful

idols of Dattatreya and Maruti are installed. The door to the inner shrine or *garbhagriha* is plated with silver with beautiful designs on it. In the inner shrine on a silver pedestal is an idol of Goddess Kamakshi. The idol is beautiful and is in the form of *Mahishasurmardini*. A reference to the Goddess Kamakshi is found in the Sahyadrikhanda.

To the left of Goddess Kamakshi is the image of Kalbhairava and to the right that of Vetal.

Surrounding the main temple can be seen a cement structure in which the images of Lakshmi-Narayan, Rayeshwar and Shantadurga are installed.

Of all the festivals *Mahashivratra* is celebrated with great rejoicings for nine days continuously. One can see a large crowd of devotees rushing to the temple on the day of *Ekadashi*, after *Dasara* to obtain the *Kaul-Prasad* of special significance.[1]

SONAULI

Sonauli (15° 19′ 00″ North Latitude and 74° 18′ 00″ East Longitude), a thinly populated village, is situated at a distance of about thirty-one kilometres from Sanguem, the headquarters of the taluka and the nearest town. The village receives rainfall of as much as 7,000 millimetres. It is known for its waterfall *viz.* Dudh-Sagar.

Dudh-Sagar

Located on the high hills bordering Karnataka State, Dudh-Sagar or milky falls, is well worth a visit for its scenic splendour is lovely to look at. It can be seen while travelling by rail on the Londa-Vasco section of the Pune-Bangalore-Vasco metre-gauge line. About ten minutes walk along the railway line and through a tunnel from the local station known by the same name, takes the visitor to a bridge where one can see the waterfall which cascades down in great majesty and thunder from a height of 603 metres. The downpour of the milky water is a gorgeous sight. The visitor has to climb down a number of steps to reach a spot under the bridge, where one can take shelter and enjoy the sight.

SURLA

Surla located at 15° 16′ 30″ North Latitude and 74° 15′ 00″ East Longitude, is a thinly populated village in the Sanguem taluka and lies to the north of Sanguem, the headquarters of the taluka bearing the same name. Because of the red earth of the locality the village Surla is locally known as *Tambdi* (red) Surla. Ponda, the nearest town, is located at a distance of about 23 kilometres to the south-west of Surla. Paddy and Nachani are grown in the village. Wells and rivers form the main

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[1] Naik, *op. cit.*, p. 49.

sources of water supply. Agriculture forms the main occupation of the villagers. A number of persons are engaged as labourers in the many private mining companies that surround the village. Educational facilities to the village populace are provided by four primary schools conducted by the Government.

The ancient temple dedicated to Mahadeva is the chief object of interest in the village.

Mahadeva Temple

Situated in the midst of dense forest on the bank of the river locally known as *Vazar Sakalacho Vyal,* the temple dedicated to Mahadeva is practically inaccessible at present. From Sancordem the visitor has to walk for about four hours continuously along a narrow grassy path to reach the temple. In the monsoon the visitor has to cross a number of streams to have a look at the ancient temple.

The temple is the only specimen of temple architecture of the Kadamba period in the district, and is well preserved. The Goa Kadambas were the feudatories of the Chalukyas and the Yadavas for some time. The temple may be dated back to the 12th or 13th century A.D. The construction of the temple seems to have been completed during the reign of Hemadri who was a great Pandit and minister or chief councillor of the Emperor Ramachandra of Devagiri. He is also remembered for his temple architecture. The temple is built entirely of stone masonry having monolithic pillars which depict the style more or less *Hemadpanti* i.e. mixed Hoysala-Yadava style. The temple has been declared as a national monument.

Shivratra is celebrated at the temple.

VALPOI

Valpoi (Valpai) at 15° 31′ 45″ North Latitude and 74° 08′ 30″ East Longitude, is a municipal town with a population of 2,922 as per the Census of 1971. It is the headquarters of Satari taluka. Located at a distance of about 54 kilometres from Panaji, the State capital, it covers an area of 9·36 square kilometres. The town gets an annual rainfall of 3,714·5 mm. and the maximum and minimum temperature are recorded at 31·4 C and 23·7° C respectively. Colem about 50 kilometres south of the town is the nearest railway station. A weekly bazaar is held here every Tuesday, the benefit of which is availed of by a number of people from the surrounding villages. Valpoi sports club and Gavawm Sports Club are functioning in the town.

In the town are located the temples dedicated to Maruti and Shantadurga, a Church venerated in the invocation of 'Our Lady of Lourdes' and a mosque, Jumma Masjid.

VASCO DA GAMA

Vasco da Gama is situated on the left bank of the river Zuari in 15° 23′ 45″ North Latitude and 73° 48′ 45″ East Longitude. Quite close to the town is the Mormugao Harbour. It is a streamlined town with big and shady avenues, all tarred paved streets and spacious footpaths. After the formation of Mormugao taluka bifurcating the Salcete taluka, the then Portuguese authorities carved out a township of the newly formed taluka from the adjacent villages of Chicolda, Vadem and Mormugao, etc. due to the development of the harbour and laying out of a railway line, and named it Vasco da Gama, by the decree of 1917. The harbour even now, continues to be known as Mormugao or Marmagoa.

Before the advent of the Portuguese in India, Old Goa, situated on the bank of the Mandovi river, was a flourishing centre of the east. With the defeat of the Adil Shahi dynasty of Bijapur at the hands of Albuquerque in 1510, it came under the Portuguese rule. However, with the establishment of Panaji as the capital in 1818, Old Goa could no longer serve as a port for international trade as it was incapable of receiving the growing sizes of steamships. It was mainly due to the British initiative that the Mormugao port was built to suit the changing events of time. During the olden days the port was defended by the fortress of Mormugao.

Fort of Mormugao

The construction of the fort commenced in 1624 as is evident from the inscription over its gate.[1]

The fortress is about six miles in circumference. In the 19th century, it contained towering bulwarks, three magazines, five prisons, a chapel and quarters for the guard. Some vestiges of the edifices erected in 1684 when the then Government contemplated transferring the capital over there, where then traceable at Mormugao. It derived its significance from the protection it afforded to the entrance of the port and was thus an important fortress on the western coast from the military point of view. It had 53 guns and a garrison with four officers.[2]

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[1] "Reinando em. Portugal o Catholico Rei D. Filippe III, deste nome, sendo Vice-Rey doste Estado 2. vez D. Francisco da Gama 4. Conde de Vidigueira e Almirante da India, do Conselho d'Estado de Sua Magestade e seu Gentilhomem da Camara, fez esta Fortaleza. E lancou a 1. pedra aos............de Abril de 1624 a qual se fez C........tas Terras concederam per......dellas."

TRANSLATION

"The Catholic King Dom Filippe, the third of this name, reigning in Portugual Dom Franciseo da Gama, fourth Count of Vidigueira, Admiral of India, a member of His Majesty's Council and a Gentleman of the Royal Household, being Viceroy for the second time, this Fortress was begun, the first stone being laid on.........., April 1624.........."

[2] Fonseca, *op. cit.*, p. 43.

Vasco da Gama is the residential and commercial appendage of the Mormugao Port. A linear and once a well-planned and well-maintained township, the town is now overcrowded and dusty, with settlements consisting partly of middle class residential houses and partly of hutments of industrial and commercial labourers and hotels and restaurants cluster near the town's core. The railway station and its environs constitute the town centre. The town is a passenger traffic terminal while the Mormugao railway station beyond, almost entirely handles goods. The Dabolim airport is open for civilian use and that has attracted some building activity along the plateau slope at the top of the Vasco da Gama-Cortalim road.

The town is divided into two zones namely, Central Zone and Southern Zone known as Baina. The Central Zone is remarkable for the intense commercial and industrial activities carried out there. The main public departments, the parish church and the railway station are located in this zone which is densely populated. It has several avenues bordered with fine trees. In the southern zone or Baina connected with the former by a fine tar road, there is a beautiful beach with a marginal promenade. The power house supplying power to the town is also located here. The town has been provided with all modern amenities such as regular piped water, electric supply and good transport and accommodation facilities for tourists. Night soil is carried through open drainage with latrines fitted with septic tanks. The town has been provided with fire fighting service. The climate of the town is tropical but tempered by sea and river breezes, so that it is quite pleasant like a sea resort.

Mormugao Harbour

Mormugao harbour is situated on the west coast of India in latitude 15° 24′ 30″ North and longitude 73° 48′ 00″ East and known as one of the best harbours on the west coast of India and is the principal focus of economic activity in Goa. Situated on the sourhern bank of the Zuari estuary the harbour enjoys some natural protection from the lateritic plateau abutting it ; the harbour has been further improved by a protective wall. Formerly, it used to be a small passenger port importing and exporting a limited amount of cargo ; iron and manganese mining activity opened up in the last years of the Portuguese rule gave the port a new dynamism ; export of minerals mainly to Japan is its almost sole function and for this purpose the port has been modernised and ancilliary improvements include a pelletisation plant and ship repairing yards. After Independence, the shipping activity of the port has shown further progress, Japan remaining the principal buyer of the exports.

The imports of Mormugao are minor as compared with its exports, and most of the foreign going vessels come in ballast for loading ores. But the coastal trade with other parts of the country is substantial and

carried partly by steamers and partly by sailing vessels. Consumer goods come in largely from Bombay. Foodgrains such as wheat, *jowar* and *bajri* are brought by rail. Building and repairs of barges is an important ancilliary activity of Mormugao. Mormugao proper is essentially a functional settlement with transport as the main activity though building construction and dock extensions, etc. attract an appreciable element of migrant labour from the plateau parts of Karnataka and Andhra. Buildings of some commercial firms, of administrative offices and temporary hutments of building and construction work labourers adhering to the ochre coloured table-land edge and top, railway sidings, pelletisation plant, mechanical loaders, berths and the protecting wall in the less of which several vessels anchor in stream, are the main features of the landscape of Mormugao.

Mormugao has now acquired another activity of significance. As a naval station, the port and the riverine transport receive direct attention from the Defence Department and the landscape expressed itself of this function through the newly built administrative, residential and other buildings dotting the plateau with the airport as its main place.

Amenities

The municipality constructed two buildings with shops and residential flats, one meant for the poor people and the other for its staff. Plans are being drawn for the construction of houses for middle income group population at Baina and Pixeantoque on municipal plots. The total length of roads under the municipal council is 13·4 kilometres of which a length of 11·9 kilometres is black topped. The municipality maintains a garden and a children's park which are pleasant spots for relaxation.

Medical facilities

Ample medical facilities to the town population are provided by two hospitals, two dispensaries, two health centres and one family planning centre. In addition to this, there are a number of private medical practitioners and nursing homes giving medical aid to the sick.

Educational facilities

Primary education is compulsory and its implementation vests in the Government. Five Primary schools and seven secondary schools provide educational facilities to the town populace. An Arts and Commerce College established by the Mormugao Education Society provides facilities for collegiate education. There are three shorthand and typewriting institutions, in the town.

Recreational facilities

Recreational facilities are provided to the public by a stadium and two cinema theatres which exhibit both foreign and Indian films. In the

town, the various clubs are Bogla Cricket Club, Vasco Sports Club, Salgaonkar Sports Club, Mineral and Metal Trading Corporation of India, E.T.D. Recreation Club, Youth Club of Vasco da Gama, Civilian Staff Club and Twinkling Stars Club. The stadium of Vasco has earned the reputation of being one of the popular venues for football tournaments in the country.

The town has a number of objects of interest, such as *Gurudwara* (Shri Guru Singh Sabha), Damodar shrine, Lakshmi-Narayan temple, Mahalakshmi or Ambabai temple, St. Andrew' Church, a masjid and Baina beach. The foundation stone of *Gurudwara* was laid in 1968 and was inaugurated in 1972. Damodar shrine is housed in the residence of Shri Vasant Joshi where a *saptaha* is pompously celebrated every year.

Mahalakshmi or Ambabai temple

Situated in Mangor, the Mahalakshmi or Ambabai temple is built in modern style with a huge *mandap* supported on pillars. A fine garden and *dipmal* is seen in front of the *sabhamandap* in the courtyard. In the centre of the sanctuary is installed a silver image of Goddess Mahalakshmi. The deity is said to have been consecrated on *Vaishakha Shuddha* 7 and 8 in *Saka* 1893. Friday is considered as a sacred day and *bhajan* is held on every Friday. Among the more important festivals celebrated at the temple are *Navaratra* and *Jayanti.*

St. Andrew's Church

St. Andrew's Church stands in the heart of the town. St. Andrew is honoured and venerated as the patron Saint of the parochial churches of Mormugao and Goa Velha. The statue is said to have been established in 1570. The front facade of the Church was renovated in Gothic style later on. A feast is celebrated on the Sunday closest to the 30th November every year.

Baina Beach

Baina beach on the southern zone of the town on the left bank of the river Zuari is used mainly by the citizens as a place of relaxation and for swimming. It is spread over three kilometres and linked with a tarred road. The beach faces the Mormugao harbour directly across the waters and commands a picturesque view of the same. Specially at night, scores of illuminated ships and a blaze of harbour lights reflected on the bay make an enthralling sight.

VELINGA

Velinga (Veling) at 15° 25′ 45″ North Latitude and 73° 53′ 00″ East Longitude, is a village with 1,397 inhabitants as per the census of 1971. It lies about 5·2 kilometres to the north-west of Ponda, the headquarters of the taluka bearing the same name, in which it is located. The village

occupies an area of 215·8 hectares. Wells form the main source of water supply and rice is the staple food of the villagers. Velinga has two primary schools conducted by the Government. It also has a library and a sports club *viz.* Independent Sports Club.

Lakshmi-Narasinha temple

The temple dedicated to Lakshmi-Narasinha belongs to the 16th century A.D. and is situated at the foot of a hillock quite close to the Panaji-Ponda road. From Mhardol, one can reach the temple within fifteen minutes. It stands in the midst of fascinating surroundings as nature herself has bestowed on it all her beauty and glory. These surroundings enhance religious meditation. A spacious water tank in front of the temple is constantly fed by a spring.

It is reported that during the settlements in Goa, the temple of Narasinha was installed at Sancoale (Mormugao taluka) with all religious pomp and ceremony. In 1567, Captain Diogo Fernandes of Rachol fortress destroyed the deities and burnt the temples. Hence the deity was shifted to the present site in Antruz mahal, then under the rule of the Nawab of Bijapur.

The *garbhagriha* of the temple contains a wooden canopy plated in silver with exquisite designs over it, in which rests a small idol of Lakshmi-Narasinha. Narasinha is the fifth incarnation of Lord Vishnu[1] and his images are rarely found in Goa.

The principal festival held at the temple is that of *Ramanavami* in *Chaitra*, *Akshaya tritiya* on *Vaishakha Shuddha* 14, which attract a large number of persons.

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[1] The Narasinha (man lion) form was assumed by Lord Vishnu for the destruction of the demon Hiranyakasipu, a powerful devil, who posed as God himself and prohibited the worship of Vishnu throughout the fourteen worlds. Hiranyakasipu's son Prahlad was a persecuted devotee of Vishnu and his deity. To deliver the son from his father, Vishnu assumed the form of Narasinha and killed Hiranyakasipu. The form of the man-lion was chosen and the demon had obtained a boon by which he could not be destroyed by either man or beast.—
(*Hindu religion, Customs* and *Manners* BY P. THOMAS, p. 23).

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APPENDIX

EVOLUTION OF ADMINISTRATIVE

Designation	No. of Concelhos							
	1881	1900	1910	1921	1931	1940	1950	1960
1				2				
District of Goa :								
Concelho of Tiswadi	1	1	1	1	1	1	1	1
Concelho of Salcete }				1	1	1	1	1 }
Concelho of Mormugao }	1	1	1	1	1	1	1	1 }
Concelho of Bardez	1	1	1	1	1	1	1	1
Concelho of Pernem	1	1	1	1	1	1	1	1
Concelho of Bicholim }			1	1	1	1	1	1 }
Concelho of Satari }	1	1	1	1	1	1	1	1 }
Concelho of Ponda	1	1	1	1	1	1	1	1
Concelho of Sanguem	1	1	1	1	1	1	1	1
Concelho of Quepem	1	1	1	1	1	1	1	1
Concelho of Canacona	1	1	1	1	1	1	1	1
Anjediva Island	..	..	..	..	..	..	..	..

Designation	No. of Villas							
	1881	1900	1910	1921	1931	1940	1950	1960
1					5			
District of Goa :								
Concelho of Tiswadi	..	..	..	..	..	..	..	..
Concelho of Salcete }	.. }	..	1	1	1	..	..	.. }
Concelho of Mormugao }	1 }	1	..	..	..	..	..	.. }
Concelho of Bardez	1	1	1	1	1	..	..	..
Concelho of Pernem	..	..	..	..	..	1	1	..
Concelho of Bicholim	..	..	..	..	..	1	1	.. }
Concelho of Satari	..	..	..	..	..	1	1	.. }
Concelho of Ponda	..	..	..	..	..	1	1	..
Concelho of Sanguem	..	..	..	..	..	1	1	..
Concelho of Quepem	..	..	..	..	..	1	1	..
Concelho of Canacona	..	..	..	..	..	1	1	..
Anjediva Island	..	..	..	..	..	..	..	..

1

DIVISIONS, GOA DISTRICT, 1881-1960

No. of Provinces				No. of Towns							
1881	1900	1950	1960	1881	1900	1910	1921	1931	1940	1950	1960
		3						4			
1	..	..	..	2	1	1	1	1	1	1	1
						..	..	..	1	1	1
1	..	..	.. }	.. }	..	..	1	1	1	1	1
1	..	..	..	..	..	..	..	..	1	1	1
1	..	..	..	..	..	..	..	..	..	..	1
	..	..	..	..	..	..	..	..	..	..	1
2	..	..	..	..	..	..	..	..	..	..	1
1	..	..	..	..	..	..	..	..	..	..	1
2	..	..	..	..	..	..	..	..	..	..	1
3	..	..	..	..	..	..	..	..	..	..	1
1	..	..	..	..	..	..	..	..	..	..	1
1	..	..	..	..	..	..	..	..	..	..	..

No. of Villages							
1881	1900	1910	1921	1931	1940	1950	1960
				6			
28	27	27	18	18	18	26	26
			24	24	24	43	43
20 }	31 }	31	5	5	5	12	12
27	27	27	26	26	26	42	42
13	3	3	21	21	21	23	23
3	2	2	18	18	13	25	25
..	1	1	6	6	6	8	8
3	3	3	17	17	17	29	29
1	1	1	10	10	10	10	10
2	2	2	14	15	15	25	25
2	4	4	6	6	6	8	8
1	1	1	..	..	..	..	..

APPENDIX 2

LIST OF CHIEF TREES, SHRUBS, CLIMBERS, BAMBOOS, GRASSES AND FERNS FOUND IN THE FORESTS OF GOA

Botanical Names	Local Names
TREES	
Terminalia Crenelata	Marat
Terminalia Paniculate	Kindal
Terminalia Bellerica	Goting
Xylia xylocarpa	Jamba
Lagerstroemia Lanceolata	Nano
Adina cordifolia	Hedu
Schleichera oleosa	Kusum
Dalbergia latifolia	Sissum
Artocarpus integrifolia	Panas
Bambax ceiba	Sawar
Grewia tiliaefolia	Dhamen
Pterocarpus Marsupium	Asan
Albezzia lebbek	Siros
SHRUBS	
Holorrena antidysenterica	Kudo
Tibernaemontana heyneana	Nagilkudo
Vitex negunda	Negund
Glycosmis pantaphylla	Menki
Leea indica	Dimdo
Murraya exotica	Kadi nimb
Toddalia asiatica	Limbadi
Ixora nigricans	Katkuda
Ixora coccinea	Pitkali
Colebrookea oppositifolia	Bamhan
Canthium dicoce um	Tupa
Syzygium Zeylanicum	Pitkuly
Callicarpa tomentosa	Phali
Clerondendron infortunatum	Kudvi
CLIMBERS	
Wagatea spicata	Vakeri
Calamus rotang	Pet
Eleagnus conferta	Amguli
Gnetum ula	Anlaso
Zizyphus rugosa	Churni
Derris scandens	Salory
Tragia Muelleriana	Churki
Cyclea burmanni	Phadwel
Polyognum chinese	Paral
Embelia ribes	Ambti
Smilex zeylanica	Ghotvel
Capparis moonii	Vaghanti
Mucana prurita	Khatkutli

APPENDIX 2—contd.

Botanical Names	Local Names
Asparagus racemosa ..	.. Shatavari
Calycopteris floribunda ..	.. Ukshi
Entada phaseoloides ..	.. Garbi
Caesalpinea nuga ..	.. ..
BAMBOOS	
Dendrocalamus strictus ..	.. Udh
Bambusa arundanacea ..	.. Velu
Oxytenanthara ritcheyi ..	.. Chiva
GRASSES	
Saccharum spontaneum ..	.. Kanjar
Themeda quadrivalvis ..	.. Karad
Andropajan pumilus ..	.. ..
Panicum maximum ..	.. Gini-gavat
FERNS	
Adiantum lunulatum ..	.. Supli
Pteris acquilina ..	.. Bracken
Asplenium unilaterale ..	.. Pamdan
Lygodium flexuosum ..	.. (Climbing fern)
Gymnopteris subcrenata ..	.. (Walking fern)

APPENDIX 3

MEDICINAL PLANTS

List of Medicinal Plants as found in the District of Goa

1. Ganji .. (*Abrus precatorius*)—leaves, roots and seeds.
   Uses .. For the cure of sore throat, dry cough, ardour urine, rheumatism, prevention of conception, for skin disease, ulcers and eye diseases, and serves as a blood purifier, a purgative and a tonic.

2. Shami .. (*Acacia arabica*)—Tender leaves, bark and gum.
   Uses .. Treatment of gonorrhoea, leucorrhoea, vaginal discharge, prolapse of uterus, diarrhoea, dysentry, diabetes, bleeding from bites of leeches and as an expectorant.

3. Shikakai .. (*Acacia concinna*)—leaves and pods.
   Uses .. Treatment of jaundice, malarial fever, a mild laxative, biliousness, promotes growth of hairs, kills dandruff and skin diseases.

4. Aduso .. (*Adhtoda vasica*)—leaves, root, bark, flowers and fruits.
   Uses .. An antispasmodic, treatment of chest diseases, phthisis, chronic bronchitis, asthma, diarrhoea, dysentry, malaria fever, fresh wounds, rheumatic joints, inflammatory swellings, scabies, neuralgic pains, nose bleeding, diptheria, gonnorrhoea, an antiseptic and arthelmentic.

5. Belpatri . (*Aegle marmelos*)—leaves, root, bark and fruits.
   Uses .. A mild laxative in fever and asthma, treatment of constipation, jaundice, diarrhoea, dysentry, dyspepsia, antiscorbutic and a tonic. A sharbet of ripe fruit gives cooling effect.

6. Anasaroli .. (*Alangium Salvifolium*)—root and bark.
   Uses .. Treatment of dogbites, a purgative, antidote and emetic.

7. Shiras .. (*Albizzia lebbeck*)—leaves, bark, flowers and seed.
   Uses .. Treatment of night blindness, an astrigent, piles, diarrhoea, dysentry, gonorrhoea, cure of spongy gum boils, swellings, scrofulous enlargement of glands, and eye diseases.

8. Satun .. (*Alstonia scholaris*)—leaves and bark.
   Uses .. Treatment of ulcers, fevers, dyspepsia, dibility, skin diseases, liver complaints, chronic diarrhoea and dysentry.

9. Kaju .. (*Anacardium occudentale*)—bark, apple, shell oil and seed.
   Uses .. In leprosy, ringworm, corns, obstinate ulcers, scurvy, diarrhoea, uterine complaints, dropsy, neuralgic pains, rheumatisms, elephantiasis, the seed oil is an excellent emollient and used in gastroenterites.

10. Sitaphal .. (*Annona squamosa*)—leaves, bark, fruit and seeds.
    Uses .. For the treatment in prolapse of the anus of children, boils, ulcers, a fly infested sore, malignant tumours, hysteria, dirarrhoea, acute dysentry, malancholia, spinal diseases, a tonic and an abortifacient.

APPENDIX 3—contd.

11.	Brumha-dandi ..	(*Argmone mexicana*)—root and seeds.
	Uses ..	Treatment of dropsy, jaundice, skin diseases, gonorrhoea, blisters, rheumatic pains, ulcers, vesicular calculus, boils, abscesses, cough, pulmonary diseases, asthma, whooping cough, diseases of intestine.
12.	Sathavari ..	(*Asparangus racemosus*)—roots.
	Uses ..	Treatment of dysentry, diarrhoea, tumours, inflammations, biliousness, blood diseases, kidney, liver, eye and throat complaints, tuberculosis, leprosy, epilepsy, night blindness, scalding urine, rheumatism and gonorrhoea.
13.	Kadulimbu ..	(*Azadirachta indica*)—leaves, bark, gum, flowers, fruits and seeds.
	Uses ..	Treatment of Jaundice, skin diseases, malarial fever, boils chronic ulcers, small-pox, syphilitic sores, an effective vaginal douche in after treatment of child-birth, liver complaints, a purgative, a tonic for treatment of general debility, nervous headache, urinary diseases, piles and intestinal worms.
14.	Palas ..	(*Butea monosperma*)—leaves, bark, flowers and seeds.
	Uses ..	In diarrhoea, heartburn, sweating of phthistis, diabetes, flatulent colic, piles, ulcers, cough, catarrh and ringworm diseases.
15.	Undi ..	(*Calophyllum inophyllum*)—bark, root and leaves.
	Uses ..	Treatment of sore eyes, ulcers, leprosy, gonorrhoea and skin diseases.
16.	Bhavo ..	(*Cassia fistula*)—leaves, roots and pods.
	Uses ..	Treatment of paralysis, rheumatism, skin diseases, diabetes, intestinal obstructions, black water fever, a strange purgative and tonic.
17.	Taikulo ..	(*Cassia tora*)—leaves, roots and seeds.
	Uses ..	Treatment of gonorrhoea, fever and headache, children diarrhoea and a laxative.
18.	Sanvor ..	(*Bombax ceiba*)—leaves, bark, pods, roots and gum.
	Uses ..	Treatment of gonorrhoea, fever and headache, children diarrhoea and a laxative.
19.	Brahmi ..	(*Centella asiatica*)—entire plant.
	Uses ..	A tonic, blood purifier, for treatment of nervous diseases amenorrhoea, piles, elephantiasis, skin diseases, dysentry of children and bowel complaint, rheumatism, mental weakness and poor memory, gonorrhoea, jaundice and fevers.
20.	Dalchini ..	(*Cinnamomum Zeylanicum*)—bark, root and leaves.
	Uses ..	Treatment of amenorrhoea, typhoids, rheumatism, headache, toothache, paralysis of tongue, nausea, vomitting, gastric irritations, neuralgic pains, and tedious labour caused by defective uterine contraction.

APPENDIX 3—contd.

21. Ganjan .. (*Cymbopogon citratus*)—leave and seeds.

Uses .. In diaphoretic, a stimulant in catarrh and febrile conditions, dysmenorrhœa, disordered menstruation, vomiting, diarrhœa, dropsical condition caused by malaria, rheumatic pain, sprains, ringworm disease, gastric irritability, cholera, and is a tonic.

22. Durvo .. (*Cynodon dactylon*)—entire plant.

Uses .. In haematuria, vomitting, chronic diarrhoea, dysentry, hysteria, insanity, bleeding of piles, irritation of bladder, secondary syphilis and vesical calculus.

23. Dhaturo .. (*Datura innoxia*)—leaves, stem, fruits and seeds.

Uses .. Treatment of asthma, whooping cough, bronchitis, gonorrhoea, tumours, rheumatism, difficult menstruation, inflamed breasts, skin diseases, burns, boils, dandruff and falling of hair and decaying teeth trouble.

24. Pangaro .. (*Erythrina indica*)—leaves and bark.

Uses .. Treatment of round worms, tape worms, thread worms, chronic dysentry, dressing of ulcers, toothache, rheumatic pains, venereal buboes, and eye diseases.

25. Anvalo .. (*Emblica officinalis*)—fruits and seeds.

Uses .. In fevers, hicoup, vomitting, indigestion, constipation, diarrhoea, dysentry, biliousness, haemorrhage, gonorrhœa, opthalmia, fevers, diabetes, nausea, scabies and itch A source of Vitamin C.

26. *Vad* .. (*Ficus bengalensis*)—leaf buds, bark, latex and aerial roots.

Uses .. In diarrhoea, dysentry, piles, abscesses, diabetes, toothache and vomitting.

27. Rumbad .. (*Ficus glomenata*)—leaves, bark, latex, figs.

Uses .. Treatment of bilious disorders, dysentry, menorrhagia, hœmoptysis, spongy gums, smallpox, hœmaturia, diabetes, ulcers, diarrhoea, rheumatic and chest pains.

28. Pipal .. (*Ficus religiasa*)—bark and figs.

Uses .. Decoction is used in gonorrhœa and scabies, treated for, toothache, for cracked and inflammed soles of the feet, sores, a laxative and used to cure asthma.

29. Bhirand .. (*Garchinia indica*)—fruit and seeds.

Uses .. Treatment of urticarias, dysentry, mucuous diarrhœa, phthisis pulmonalis and scorbutic diseases,chapped hands, abrations, ulcerations and fissures on the body.

30. Shivan .. (*Gmelina arborea*)—leaves and roots.

Uses .. Treated for gonorrhœa, catarrh of bladder, cough, cleaning the ulcers, insanity, epilepsy, fevers, indigestion, anasarca and a nerve tonic.

APPENDIX 3—contd.

31. *Sarsaprila* .. (*Hemid Esmus indicus*)—roots.
   Uses .. Treated for dyspepsia, fever, skin diseases, syphilis, leucorrhoea, genito-urinary diseases, chronic cough, rheumatic pains and boils.

32. Kudo .. (*Holarrhena antidysenterica*)—bark and seeds.
   Uses .. In amoebic dysentry, piles, leprosy, colic, dyspepsia, chronic chest complaints, diuresis, spleen diseases, jaundice, billous, bladder calculi and given to women after child-birth.

33. Kadu Kavath (*Hydnocarpus kurzii*)—seeds.
   Uses .. Skin diseases and wounds.

34. Moi .. (*Lannea coromandelica*)—Tender branches, bark and gum.
   Uses .. In coma caused by overdose of narcotics, dyspepsia, general debility, gout and dysentry, sore eyes, leprosy, sprains and bruises.

35. *Mallotus philippinensis.* Leaves.
   Uses .. In debility, tapeworms, ringworms, scabies, herpes and other skin diseases.

36. Ambo .. (*Mangifera indica*)—bark, gum, fruit and seeds.
   Uses .. Treated for menorrhagia, leucorrhœa, mucopurulent discharges from uterus and bowels, dysentry, bleeding piles harmorrhage from the lungs, intestines or uterus and diarrhœa, diptheria prolapse of vagina and rectum, nasal, catarrh and skin diseases.

37. Nag-chapa .. (*Mesua Ferrea*)—bark, flowers, fruits and seeds.
   Uses .. Dysentry, vomitting, cough, irritability of the stomach, excessive perspiration and bleeding piles, burning feet, genito-urinary diseases, wounds and skin diseases.

38. Vonvol .. (*Mimusops elengi*)—bark, root, flowers and fruits.
   Uses .. Fevers, teeth trouble, pustular eruptions of skin, bathing wounds, ulcers, headaches and tonic.

39. Lajje zad .. (*Mimosa pudica*)—Leaves and roots.
   Uses .. Treatment of kidney, piles, fistular sores, urinary diseases and abscesses.

40. Karbel .. (*Murraya koengii*).—leaves, bark and roots.
   Uses .. In dysentry, diarrhœa, vomitting, paste is applied over bruises and bites of venomous animals.

41. Kali-miri . (*Piper nigrum*).—Berries.
   Uses .. Uses for dyspepsia, flatulence, debility, prolapse of anus, diarrhœa, piles, urinary disorders, cough, vertigo, coma, gonorrhœa, malarial fever, boils, relaxed sore throat, paralytic affectation, rheumatic pains, headache, prolapsed rectum, skin diseases, toothache, alopacia and urticaria.

APPENDIX 3—contd.

42. Galai .. (*Randia dumetorum*).—bark and fruits.
 Uses .. In diarrhoea, dysentry, rheumatism, nausea, and as an expectorant.

43. Adiki .. (*Rauwolfia serpentina*)—roots.
 Uses .. Treated for insomnia, hypochondriasis, insanity, irritable condition of the central nervous system, high blood pressure, intestinal disorders, diarrhoea and dysentry.

44. Sanvar .. (*Salmalia malbarica*).—bark, gum, root, flower and fruits.
 Uses .. Treated for abnormal uterine bleeding, haemoptysis of pulmonary tuberculosis, influenza, vomitting of blood, menorrhagia, infantile diarrhoea, sore eyes, ulceration of the bladder and the kidneys, gonorrhoea, gleet and chronic cystits.

45. Ashok .. (*Saraka indica*).—bark and flowers.
 Uses .. In uterine disorders especially for menorrhagia and leuchorrhoea, internal piles, dysentry and diabetes.

46. Biba .. (*Semicarpus anacardium*).—fruit.
 Uses .. In dyspepsia, piles, skin diseases, nervous debility, worms, palay and epilepsy, syphilis, asthma and neuralgia.

47. Kazro .. (*Strychnos nux-vomica*).—Wood and seeds.
 Uses .. Intermittent fevers, cholera, acute dysentry, debility, worms, hysteria, hydrophobia, tobacco amaurosis, mental emotions, gout, insomnia, spasmodic diseases as vomitting of pregnancy, opium poisoning, sexual impotence and for bronchitis.

48. Jambul .. (*Syzigium-cumuni*).—leaves, bark, fruits and seeds.
 Uses .. Dysentry, chronic diarrhoea, menorrhagia, enlargement of spleen, spongy gums, stomatitis, suppressed urine and diabetes.

49. Chinch .. (*Tamarindus indica*).—leaves, bark, fruit and seeds.
 Uses .. In jaundice, sprains, boils, sore eyes, scabies, alcohol intoxication, dhatoora poisoning, bilious vomiting and in sun-stroke.

50. Sailo .. (*Tectona grandis*).—bark, wood flower and seeds.
 Uses .. Dyspepsia, heartburn, headache, toothache, diuresis, a hair tonic and for skin itch.

51. Ghoting .. (*Terminalia balerica*).—fruits.
 Uses .. In piles, diarrhoea, fever and dropsy, cough, hoarseness of voice, sore throat, dyspepsia and a purgative.

52. Hirda .. (*Terminalia chebula*).—fruits.
 Uses .. A mild laxative treated for dysentry costiveness, flatulence, asthma, urinary disorders, vomitting, hiccup, intestinal worms, ascites, enlarged spleen and liver, vaginal discharges, ulceration of gums, a dressing for burns and scalds and piles. A cardiac tonic.

APPENDIX 3—concld.

53. Maretha .. (*Terminalia tomentosa*).—bark.

Uses .. Treatment of ulcers, haemorrages, fractures, bronchitis, leuchorrhoea, gonorrhoea, diarrhoea, dysentry, ecchymosis, and spitting of blood.

54. Amrut Val .. (*Tinospora cordifolia*).—entire plant.

Uses .. Rheumatism, urinary diseases, dyspepsia, general debility, syphilis, gonorrhoea, biliousness, fevers, piles, bronchitis spermatorrhoea, impotence, jaundice, torpidity of liver, and for fractures.

55. Nirgud .. (*Vitex negundo*).—leaves, roots and flowers.

Uses .. In catarrhal fever, rheumatism, enlargement of spleen headaches, sprains, inflammatory swellings of joints sinuses scrofulous ulcers, sloughing wounds, cholera and haemorrhages.

56. Bor .. (*Zizyphus jujuba*).—leaves, bark and fruits.

Uses .. In gonorrhoea, abscesses, boils, dysuria, colic and inflammation of gums, a mild laxative and an expectorant.

57. Garbhamaro .. (*Pittosperumum dasycaulom*).—leaves.

Uses .. .. In abortions.

Important Fibres and Flosses found in the district are as follows :—

Sardol	..	*Sterculia villosa*
Kewan	..	*Helicteres isora*
Dhaman	..	*Grewia tiliaefolia*
Rui	..	*Calotropis gigantea*
Billamad	..	*Caryota urens*
Sanvar	..	*Salmalia malabaricum*
Gol	..	*Trema orientalis*

Tanning Barks of the following varieties are found in the district :

Cassia fistula	*Terminalia arjuna*
Emblica officianalis	*Syzygium cumunii*
Lannea coromandelica	*Legistroemia parviflora*
Terminalia tomentosa	*Sylia Xylocarpa*
Careya arborea	

APPENDIX 4

LIST OF FISHES [1]

Sub-Class—Teleostei
Order—Acanthopterygii
Family—Percidae
Genus : Lates

Scientific name (1)	Local name (2)
Lates calcarifer	Chankulo
Family : Percidae	
Genus : Serranus	
Serranus malabaricus	Gobro
Serranus maculatus	Do.
Serranus sexfasciatus	Do.
Sorranus grammicus	Do.
Genus : Lutianus	
Lutianus Johni	Tambso
Lutianus Argontimaculatus	Do.
Genus . Ambassis	
Ambassis commersoni	Tel Buratto
Ambassis gymnocephalus	Do.
Genus : Apogon	
Apogon prenatus	Tambas
Apogon multitaeniatus	Do.
Genus : Therapon	
Therapon Jarbus	Kurkaro
Therapon puta	Do.
Therapon therapos	Do.
Genus : Pristipoma	
Pristipoma hasta	Callas
Pristipoma guaraka	Do.
Genus · Synagris	
Synagris japonicus	Rane
Synagris tolu	Do.
Genus . Gerres	
Gerres setifer	Shotuk
Gerres filamentosa	Do.
Gerres oblongous	Do.
Gerres lucidus	Do.
Family : Squamipinnes	
Genus : Chastodon	
Chastodaon Vittatus	Ankrit

[1] As taken from the system of classification followed as per Fishers of India by Francis Day—Volume I.

APPENDIX 4—contd.

(1)	(2)
Genus : Heniochus	
Heniochus macrolepidotus	Combo
Genus : Scatophagus	
Scatophagus argus	Mutre
Genus : Drepane	
Drepane punctata	Combo
Family : Mullidae	
Genus : Upaneoides	
Upaneoides sulphureus	Rane
Upaneoides vittatus	Do.
Genus . Upeneus	
Upeneus indicus	Rane
Family : Sparidae	
Genus : Chrysophrys	
Chrysophrys datnia	Palu
Chrysophrys barda	Do.
Family : Scorpaenidae	
Genus : Pterois	
Pterois russellii	Tambade
Genus . Scorpaenopsis	
Scorpaenopsis oxyeephalus	Unkir
Genus : Minous	
Minous monodactylus	Band'e
Genus : Polycaulis	
Polycaulis uronosopus	Chugum
Family : Tauthididae	
Genus : Teuthis	
Teuthis Oramin	Ankret
Family : Kurtidae	
Genus : Pempheris	
Pempheris molluca	Shetuk
Family : Polynemidae	
Genus : Polynemus	
Polynemus tetradactylus	Ranwas
Polynemus heptadactylus	Do.
Polynemus sextarius	Do.
Polynemus xanthonomous	Do.
Polynemus indicus	Do.
Family : Sciaenidae	
Genus : Sciaena	
Sciaena glaucus	Dodiaro
Sciaena carutta	Do.
Sciaena dicanthus	Do.

APPENDIX 4—contd.

(1)	(2)
Genus : Sciaenoides	
Sciaenoides brunneus	Dodiaro
Genus : Otolithus	
Otolithus argenteus	Dodiaro
Otolithus maculatus	Do.
Otolithus ruber	Do.
Family : Trichiuridae	
Genus : Trichiurus	
Trichiurus savala	Bale
Trichiurus haumala	Do.
Family : Carangidae	
Genus : Caranx	
Caranx sausun	Konkar
Caranx rottleri	Do.
Caranx djeddaba	Arro
Caranx malabaricus	Konkar
Caranx carangus	Do.
Caranx Kurra	Arro
Caranx Gallus	Combo
Caranx hippos	Do.
Caranx affinis	Arro
Genus : Chorinemus	
Chorinemus moadetta	Diana
Chorinemus toloo	Do.
Genus : Platax	
Platax teira	Combo
Genus : Equula	
Equula insidiatrix	Khapi
Equula blochii	Do.
Equula bindus	Do.
Equula daura	Do.
Equula splendens	Do.
Genus : Lactarius	
Lactarius lactatius	Soundale
Family : Stromateidae	
Genus : Stromateus	
Stromateus cinereus	Surgunti
Stromateus sinensis	Poplet
Stromateus niger	Halwa
Family : Coryphaenidae	
Genus : Mene	
Mene maculata	Hamp

APPENDIX 4—contd.

(1)	(2)
Family : Scombridae	
Genus : Scomber	
Scomber microlepidotus (Day)	Bangada
Cuvier : Rastralliger Kanagurta	
Genus : Thynnus	
Thynnus thunnina	Bokado
Genus : Cybium	
Cybium guttatum	Viswan
Cybium commersonii	Do.
Cybium interruptum	Do.
Genus : Elacate	
Elacate nigra	Morso
Genus . Echeneis	
Echeneis remora	Luksi
Echeneis brachyptera	Do.
Family : Trachinidae	
Genus : Sillago	
Sillago sihama	Muddosi
Family : Batrachidae	
Genus : Batrachus	
Batrachus grunniens	Gugum
Family : Cottidae	
Genus : Platycephalus	
Platycephalus scabar	Dhuyari
Platycephalus tuberculatus	Do.
Platycephalus serratus	Do.
Family : Gobidae	
Genus : Gobius	
Gobius giuris	Pharsandi
Genus : Trypauchen	
Trypauchen vagina	Tambde bale
Family : Rhynchobdellidae	
Genus : Mastacembelus	
Mastacembelus armatus	Ingi
Family : Sphyraenidae	
Genus . Sphyraena	
Sphyraena jello	Toki
Sphyraena acutipinnis	Do.
Family : Atherinidae	
Genus : Atherina	
Atherina forskalli	Dmas
Family : Mugilidae	
Genus : Mugil	
Mugil cephalus	Savato
Mugil speigleri	Do.

APPENDIX 4—contd.

(1)	(2)
Family : Aulostomateidae	
Genus : Fistularia	
Fistularia serrata	Lamb tonki
Family : Ophiocephalidae	
Genus : Ophiocephalus	
Ophiocephalus striatus	Chikale
Family : Platyglossus	
Genus : Platyglossus	
Platyglossus bimaculatus	Budbude
Family : Chromides	
Genus : Etroplus	
Etroplus suratensis	Kalunder
Order : Anacanthini	
Family : Gadidae	
Genus : Bregmaceros	
Bregmaceros aitripinnis	Dinas
Family : Pleuronectidae	
Genus : Psettodes	
Psettodes crumei	Lep
Genus : Pseudorhombus	
Pseudorhombus tricellatus	Lep
Genus : Soles	
Sole ovata	Lep
Genus : Synaptura	
Synaptura zebra	Tide Lep
Synaptura commersoniana	Do.
Genus : Cynoglossus	
Cynoglossus lingua	Lep
Cynoglossus lida	Lep
Order : Physostomi	
Family : Siluridae	
Genus : Macrones	
Macrones seenghala	Sangat
Genus : Rita	
Rita hastata	Do.
Genus : Arius	
Arius serratus	Do.
Arius dussumieri	Do.
Genus : Osteogeniosus	
Osteogoniosus militaris	Do.
Genus : Plotosus	
Plotosus arab	Kodam

APPENDIX 4—contd.

(1)	(2)
Family : Scopelidae	
Genus : Saurida	
Saurida tubmil	Backaijaw
Genus : Harpodon	
Harpodon Nehereus	Bombil
Family : Scombrescoidae	
Genus : Belone	
Belone annulata	Tonki
Belone strongylurus	Do.
Genus : Hemiramphus	
Hemiramphus scanthopterus	Do.
Hemiramphus limbatus	Do.
Hemiramphus cantori	Do.
Hemiramphus leucopterus	Do.
Genus : Exocaetus	
Exocaetus brachytera	Xevane
Family : Cyprinodontidae	
Genus : Haplochilus	
Haplochilus lineatus	Kanare
Family : Cyprinidae	
Genus : Labeo	
Labeo fimbriata	
Genus : Barbus	
Barbus melanostegma	Petol
Barbus pinnauratus	Do.
Genus Rajbora	
Rajbora daniconius	Tel dadhi
Genus : Danio	
Danio acquipinnatus	Dinas
Family : Clupeidae	
Genus : Engraulis	
Engraulis malabaricus	Palped
Engraulis mystax	Bonzale
Engraulis dussumieri	Do.
Engraulis purva	Do.
Genus : Coilia	
Coilia dussumieri	Capsali
Genus : Chatoessus	
Chatoessus chacunda	Gibbar
Chatoessus nasus	Do.

APPENDIX 4—contd.

(1)		(2)
	Genus : Clupea	
Clupea longiceps	.. .. ..	.. Tarli
Clupea fimbriatus	.. .. ..	.. Podwe
Clupea gibbosa	.. .. ..	.. Do.
Clupea toli	.. .. ..	.. Do.
Clupea ilisha	.. .. ..	.. Do.
	Genus : Pellona	
Pellona indica	.. .. ..	.. Dawak
	Genus : Ophisthopterus	
Ophisthopterus tartoor	.. .. ..	.. Panchali
	Genus : Dussumieria	
Dussumieria acuta	.. .. ..	.. Tarsula
Dussumieria hassolti	.. .. ..	.. Do.
	Genus : Megalops	
Megalops cyprinoides	.. .. ..	.. Ker
	Genus : Chanos	
Chanos chanos	.. .. ..	.. Cholsi
	Family : Chirocentridae	
	Genus : Chirocentrus	
Chirocentrus dorab	.. .. ..	.. Karli
	Family : Muraenidae	
	Genus : Muraenesox	
Muraenesox talaboinides	.. .. ..	.. Palm
	Genus : Ophichthys	
Ophicnthys boro	.. ..	.. Kusado
	Genus : Muraena	
Muraena undulata	.. ..	.. Tadpani
Muraena tossellata	.. ..	.. Do.
	Order : Lophobranchii	
	Family : Syngathidae	
	Genus : Sygnathus	
Sygnathus serratus	.. ..	.. Pepa fish
	Genus : Hippocampus	
Hippocampus guttatus	.. .. ..	.. Samudrache ghodo
	Order : Plectognathi	
	Family : Sclerodermi	
	Genus : Tricanthus	
Tricanthus brevirostris	.. .. ..	.. Chamat
Tricanthus strigilifor	.. .. ..	.. Do.
	Genus : Ostracion	
Ostracion cornutus	.. .. ..	.. Bauchcche
	Family : Gymnodontes	
	Genus : Tetrodon	
Tetrodon inermis	.. .. ..	.. Do.
Tetrodon reticularis	.. .. ..	.. Do.
Tetrodon viridipunctatus	.. .. ..	.. Do.

APPENDIX 4—concld.

(1)		(2)
	Genus : Diodon	
Diodon hystrix	.. ..	Bancoche
	Class : Elasmobranchii	
	Order : Plagiostomata	
	Family : Carcharidae	
	Genus : Carcharias	
Carcharias laticaudus	.. ..	Mutes mori
Carcharias melanoptera	.. ..	Mori
Carcharias limbatus	.. ..	Do.
	Genus : Zygaena	
Zygaena blochii	.. ..	Kanare mori
Zygaena tudes	.. ..	Do.
Zygaena malleus	.. ..	Do.
	Family : Scyllidae	
	Genus : Chiloscyllium	
Chiloscyllium indicus	.. ..	Sunare
	Genus : Stegostoma	
Stogostoma tigrinus	.. ..	Sunare
	Sub-Order : Batoidei	
	Family : Pristidae	
	Genus : Pristis	
Pristis cuspidatus	.. ..	Vimsi
Pristis perrotteti	.. ..	Do.
Pristis zysron .	.. ..	Do.
	Family : Rhinobatidae	
	Genus : Rhynochabatus	
Rhynochabatus djiddensis	.. .. ..	Phadke
	Genus : Rhinobatus	
Rhinobatus granulatus	.. ..	Phadke
	Family : Torpedinidae	
	Genus : Narcine	
Narcine timlei ..	.. ..	Shokk
	Genus : Astrape	
Astrape distorygia	.. ..	Do.
	Family : Trygonidae	
	Genus : Trygon	
Trygon sephen	.. ..	Rede waghole
Trygon bleekeri	.. ..	Waghole
Trygon zugei ..	.. .. ..	Do.
Trygon imbricata	.. ..	Do.
	Family : Myliobatidae	
	Genus : Myliobatis	
Myliobatis nieuhojii	.. ..	Shavane waghole
	Genues : Aetobatis	
Aetobatis narinari	.. ..	Do.

APPENDIX 5

MOTHER-TONGUE (AS SPECIFIED IN THE 8TH SCHEDULE OF THE CONSTITUTION) FOR THE UNION TERRITORY OF GOA, DAMAN AND DIU AS A WHOLE AS PER THE CENSUS OF 1971

Language	Number
Marathi	1,69,260
Oriya	153
Punjabi	1,370
Sanskrit	20
Sindhi	254
Tamil	3,347
Telegu	4,114
Urdu	19,205
Assamese	97
Bengali	712
Gujarati	60,687
Hindi	10,701
Kannada	16,537
Kashmiri	11
Malayalam	5,656

APPENDIX 6

A TABLE SHOWING THE AGRICULTURAL IMPLEMENTS USED IN THE DISTRICT DURING 1972-73.

Serial No.	District/Taluka	Bullock and Manually Operated Implements						Sugar-cane crushers	
		Ploughs		Blade harrow or Bakher or Guntuka	Wetland Puddler	Earth levellers or scrapers	Carts (Animal drawn)	Worked by power	Worked by Bullocks
		Wooden	Iron						
1	2	3	4	5	6	7	8	9	10
1	Goa district ..	35,930	4,267	14,627	11,028	19,173	1,007	25	4
2	Tiswadi	1,434	123	379	83	781	132	..	..
3	Bardez	2,623	1,172	1,580	919	1,804	316	..	..
4	Pernem	6,416	26	3,233	1,522	2,628	91	..	..
5	Bicholim	3,638	114	1,877	2,018	1,980	97	..	..
6	Satari .. .	3,093	108	1,703	1,166	2,045	59	3	..
7	Ponda	2,858	38	1,720	295	1,772	39	..	..
8	Sanguem	3,104	143	1,119	984	1,838	44	16	3
9	Canacona	4,689	58	373	799	1,394	55	..	1
10	Quepem .. .	3,444	653	1,213	1,665	2,707	46	6	..
11	Salcete	4,131	1,765	1,183	1,570	2,038	110	..	..
12	Mormugao ..	500	67	247	7	186	18	..	..

APPENDIX 6—contd.

Serial No.	District/Taluka	Plant protection equipment, sprayers and dusters			Oil engine with pump set for					Electrical pump set used for irrigation	Persian wheels or rahats
		Hand operated	Engine operated	Total	Irrigation			Other agricultural purposes	Total		
					5 H. P. and below	6 to 10 H.P.	Above 10 H.P.				
	2	11	12	13	14	15	16	17	18	19	20
1	Goa district ..	1,322	259	1,581	617	48	29	18	712	60	1
2	Tiswadi ..	1,155	242	1,397	215	16	2	..	233	2	..
3	Bardez ..	50	2	52	24	1	..	..	25	..	..
4	Pernem ..	1	..	1	61	..	..	..	61	3	..
5	Bicholim ..	11	..	11	62	2	..	..	64	14	..
6	Satari ..	3	..	3	35	..	7	6	48	..	..
7	Ponda ..	20	3	23	47	..	1	5	53	25	..
8	Sanguem ..	16	3	19	44	22	11	2	79	9	1
9	Canacona ..	7	1	8	95	4	1	..	100	..	..
10	Quepem ..	46	3	49	22	3	5	2	32	3	..
11	Salcete ..	11	4	15	11	..	1	..	12	3	..
12	Mormugao ..	2	1	3	1	..	1	3	5	1	..

APPENDIX 6—contd.

Serial No.	District/Taluka	Crawler Tractors	Hand tractors or Power tillers		Four Wheeled Tractors						
		Government	Govern-ment	Private	Government			Private			
		Above 75 H.P.			35 H.P. and below	36 to 50 H.P.	Total	35 H.P. and below	36 to 50 H.P.	Above 50 H.P.	Total
1	2	21	22	23	24	25	26	27	28	29	30
1	Goa district ..	9	8	6	32	27	59	9	8	2	19
2	Tiswadi	9	8	..	32	27	59	..	..	1	1
3	Bardez	..	..	..	..	..	..	1	..	..	1
4	Pernem	..	..	..	..	..	..	..	1	..	1
5	Bicholim	..	..	2	..	..	..	..	..	..	..
6	Satari	..	..	2	..	..	..	2	..	..	2
7	Ponda	..	..	..	..	..	..	..	..	..	..
8	Sanguem	..	..	2	..	..	..	4	5	1	10
9	Canacona	..	..	..	..	..	..	..	..	..	..
10	Quepem	..	..	..	..	..	..	2	1	..	3
11	Salcete	..	..	..	..	..	..	..	1	..	1
12	Mormugao ..	..	..	..	..	..	..	..	..	..	..

APPENDIX 6—contd.

Serial No.	District/Taluka	Tractor operated implements							Other tractor operated implements
		Mould Board and Disc plough	Disc Harrows	Cultivators or tillers	Levellers or scrappers	Seed-*cum*-Fertilizers drills	Rotavotor	Trailer	
1	2	31	32	33	34	35	36	37	38
1	Goa district ..	96	35	18	180	7	12	27	89
2	Tiswadi	75	7	8	7	4	7	16	13
3	Bardez	...	....	....	.	....	...	1	....
4	Pernem	....	...	....	....	....	...	....	....
5	Bicholim	2	1	1	.	....	....	....	1
6	Satari	2	2	2	...	2	1	3	2
7	Ponda	....	....	...	....	....	....	....	....
8	Sanguem	16	23	5	172	1	3	6	75
9	Canacona	....	....	....	....	....	....	....	....
10	Quepem	1	2	1	1	....	....	1	....
11	Salcete	....	....	1	....	....	1	....	....
12	Mormugao ..	....	....	....	....	....	....	....	....

APPENDIX 6—concld.

Serial No.	District/Taluka	Power driven machines and miscellaneous equipments				Ghannies	
		Paddy threshers	Harvestor combine	Power chaff cutters	Other power operated equipments	Five kilograms and above	Less than five Kilograms
1	2	39	40	41	42	43	44
1	Goa district	16	1	1	1	2	5
2	Tiswadi	10	...	....	....	....	....
3	Bardez	....	....	....	....	2	....
4	Pernem	...	....	....	. ..	....	2
5	Bicholim	....	....	....	....	....	....
6	Satari	....	....	1	1	....	....
7	Ponda	....	....	....	....	....	1
8	Sanguem	....	....	....	....	....	2
9	Canacona	. ..	....	...	....	....	....
10	Quepem	....	....	...	....	....	....
11	Salcete	1	1	....	. ..	....	....
12	Mormugao	5	....	....	....	....	....

APPENDIX 7

A TABLE SHOWING THE LIVE STOCK POPULATION OF THE DISTRICT, TALUKAWISE, AS PER THE ELEVENTH QUINQUENNIAL LIVE STOCK CENSUS IN 1972.

Serial No.	District/Taluka	LIVESTOCK — CATTLE — Males Over 3 Years: Used for breeding only	Used both for breeding and work	Used for work only: Castrated	Used for work only: Uncastrated	Bulls and bullocks over 3 years not in use for breeding or work	Total males over 3 years	Females Over 3 years — Breeding cows i.e. cows over 3 years kept for breeding or milk production: In milk on 15th April 1972	Dry	Not calved even once	Total	Females Over 3 Years: Cows over 3 years used for work only	Cow over 3 years not in use for work or breeding purposes	Total females over 3 years
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Goa district ..	126	7,467	35,402	8,804	2,328	54,127	10,223	17,782	3,178	31,183	787	858	32,828
2.	Tiswadi ..	16	476	1,469	245	61	2,267	596	678	158	1,432	75	23	1,530
3.	Bardez ..	11	621	3,722	959	131	5,444	1,463	1,617	372	3,452	23	64	3,539
4.	Pernem ..	5	417	5,893	1,833	238	8,386	854	1,641	230	2,725	37	136	2,898
5.	Bicholim ..	10	600	3,425	1,021	178	5,234	774	1,994	225	2,993	54	70	3,117
6.	Satari ..	10	617	2,647	1,088	151	4,513	1,103	1,751	326	3,180	129	100	3,409
7.	Ponda ..	11	750	3,186	912	337	5,196	1,047	1,766	430	3,243	20	84	3,347
8.	Sanguem ..	28	1,135	3,339	943	422	5,867	1,434	2,657	316	4,407	41	188	4,636
9.	Canacona ..	3	396	4,103	574	267	5,343	765	1,873	339	2,977	9	65	3,051
10.	Quepem ..	9	1,268	3,577	506	262	5,622	596	1,537	301	2,434	53	59	2,546
11.	Salcete ..	16	1,031	3,280	601	179	5,107	1,352	1,860	415	3,627	303	54	3,984
12.	Mormugao ..	7	156	761	122	102	1,148	239	408	66	713	43	15	771

APPENDIX 7—contd.

Serial No. and District/Taluka	Live stock											
	Cattle—*Contd.*											
	Young Stock									Total Cattle		
	Under 1 year			1 to 3 years			Total 3 years and under					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	16	17	18	19	20	21	22	23	24	25	26	27
1. Goa district ..	6,033	6,151	12,184	7,547	7,522	15,069	13,620	13,673	27,293	67,747	46,501	1,14,248
2. Tiswadi ..	261	285	546	286	322	608	547	607	1,154	2,814	2,137	4,951
3. Bardez ..	691	707	1,398	712	766	1,478	1,403	1,473	2,876	6,847	5,012	11,859
4. Pernem ..	473	554	1,027	622	576	1,238	1,135	1,130	2,265	9,521	4,028	13,549
5. Bicholim ..	468	586	1,054	738	705	1,443	1,206	1,291	2,497	6,440	4,408	10,848
6. Satari ..	732	692	1,424	664	651	1,315	1,396	1,343	2,739	5,909	4,752	10,661
7. Ponda ..	471	655	1,126	803	849	1,652	1,274	1,504	2,778	6,470	4,851	11,321
8. Sanguem ..	955	829	1,784	1,119	1,188	2,307	2,074	2,017	4,091	7,941	6,653	14,594
9. Canacona ..	553	494	1,047	766	764	1,530	1,319	1,258	2,577	6,662	4,309	10,971
10. Quepem ..	588	423	1,011	835	624	1,459	1,423	1,047	2,470	7,045	3,593	10,638
11. Salcete ..	685	755	1,440	827	871	1,698	1,512	1,626	3,138	6,619	5,610	12,229
12. Mormugao ..	156	171	327	175	206	381	331	377	708	1,479	1,148	2,627

APPENDIX 7—contd.

Serial No. and District/Taluka	Livestock												
	Buffaloes—*Contd.*												
	Males Over 3 years						Females Over 3 years						
	Used for breeding only	Used both for breeding and work	Used for work only		Bulls and Bullocks over 3 years not in use for breeding or work	Total males over 3 years	Breeding cows i.e. cows over 3 years kept for breeding or milk production				Cows over 3 years used for work only	Cows over 3 years not in use for work or breeding purpose	Total females over 3 years
			Castrated	Uncastrated			In milk on 15th April, 1972	Dry	Not calved even once	Total			
1	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Goa district ..	96	1,570	6,486	2,328	248	10,728	8,805	6,315	997	16,117	220	183	16,520
2. Tiswadi ..	8	94	487	83	9	681	748	565	100	1,413	43	23	1,479
3. Bardez ..	13	176	672	140	16	1,017	1,452	723	112	2,287	4	11	2,302
4. Pernem ..	3	145	1,367	400	27	1,942	496	523	81	1,100	12	20	1,132
5. Bicholim ..	6	105	696	365	51	1,223	807	920	140	1,867	6	22	1,895
6. Satari ..	7	208	574	520	20	1,329	601	581	79	1,261	13	12	1,286
7. Ponda ..	15	252	724	242	25	1,258	1,468	985	160	2,613	4	28	2,645
8. Sanguem ..	20	69	264	145	28	526	837	546	60	1,443	18	30	1,491
9. Canacona ..	1	18	158	54	8	239	281	199	61	541	2	4	547
10. Quepem ..	4	74	290	81	23	472	265	224	33	522	5	4	531
11. Salcete ..	15	393	1,062	272	27	1,769	1,190	872	142	2,204	107	27	3,338
12. Mormugao ..	4	36	192	26	14	272	660	177	29	866	6	2	874

APPENDIX 7—contd.

Serial No. and District/Taluka	Livestock											
	Buffaloes—*Concld.*											
	Young stock			Young Stock—*Concld.*						Total Buffaloes		
	Under 1 year			1 to 3 years			Total 3 years and under			Total Buffaloes		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	41	42	43	44	45	46	47	48	49	50	51	52
1. Goa district ..	2,262	2,613	4,875	1,922	2,599	4,521	4,184	5,212	9,396	14,912	21,732	36,644
2. Tiswadi ..	165	198	363	123	146	269	288	344	632	969	1,823	2,792
3. Bardez ..	278	310	588	151	314	465	429	624	1,053	1,446	2,926	4,372
4. Pernem ..	162	168	330	130	178	308	292	346	638	2,234	1,478	3,712
5. Bicholim ..	228	310	538	287	341	628	515	651	1,166	1,738	2,546	4,284
6. Satari ..	248	233	481	204	248	452	452	481	933	1,781	1,767	3,548
7. Ponda ..	374	445	819	354	502	856	728	947	1,675	1,986	3,592	5,578
8. Sanguem ..	265	270	535	197	305	502	462	575	1,037	988	2,066	3,054
9. Canacona ..	82	89	171	66	101	167	148	190	338	387	737	1,124
10. Quepem ..	91	73	164	94	86	180	185	159	344	657	690	1,347
11. Salcete ..	246	339	585	256	308	564	502	647	1,149	2,271	2,985	5,256
12. Mormugao ..	123	178	301	60	70	130	183	248	431	455	1,122	1,577

APPENDIX 7—contd.

Serial No. and District/Taluka	Livestock									
				Sheep						
	Total Bovine			Under 1 year			1 year and over			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total Sheep
1	53	54	55	56	57	58	59	60	61	62
1. Goa district ..	82,659	68,133	1,50,792	254	351	605	198	734	932	1,537
2. Tiswadi ..	3,783	3,960	7,743	6	29	35	11	76	87	122
3. Bardez ..	8,293	7,938	16,231	12	7	19	2	22	24	43
4. Pernem ..	11,755	5,506	17,261	101	105	206	49	179	228	434
5. Bicholim ..	8,178	6,954	15,132	22	36	58	16	51	67	125
6. Satari ..	7,690	6,519	14,209	22	29	51	25	73	98	149
7. Ponda .	8,456	8,443	16,899	15	23	38	11	101	112	150
8. Sanguem ..	8,929	8,719	17,648	11	5	16	6	10	16	32
9. Canacona ..	7,049	5,046	12,095	....	....	....	....	....	....	....
10. Quepem .	7,702	4,283	11,985	14	19	33	4	116	120	153
11. Salcete ..	8,890	8,495	17,485	44	68	112	56	54	110	222
12. Mormugao ..	1,934	2,270	4,204	7	30	37	18	52	70	107

APPENDIX 7—contd.

Serial No. and District/Taluka	Livestock: Goats: Under 1 year: Male	Under 1 year: Female	Under 1 year: Total	1 year and over: Male	1 year and over: Female	1 year and over: Total	Total Goats	Horses and Ponies: Over 3 years: Total	Young Stock: Under 1 year	Young Stock: 3 years and under	Total Horses and Ponies: Male	Total Horses and Ponies: Female	Total Horses and Ponies: Total
1	63	64	65	66	67	68	69	70	71	72	73	74	75
1. Goa district ..	2,723	3,948	6,671	2,233	8,759	10,992	17,663	2	1	1	2	1	3
2. Tiswadi ..	198	318	516	137	720	857	1,373	2	1	1	2	1	3
3. Bardez ..	820	1,366	2,186	599	2,569	3,168	5,354	....	....	....	....	....	....
4. Pernem ..	205	261	466	178	420	598	1,064	....	....	...	....	....	....
5. Bicholim ..	216	362	578	184	719	903	1,481	....	....	....	....	....	....
6. Satari	91	104	195	98	300	398	593	...	....	....	....	....	....
7. Ponda ..	126	185	311	92	610	702	1,013	....	...	....	....	....	....
8. Sanguem ..	278	383	661	408	1,040	1,448	2,109	....	....	....	....	....	....
9. Canacona ..	82	76	158	47	235	282	440	....	....	....	....	....	....
10. Quepem ..	84	118	202	150	375	525	727	...	....	....	....	....	....
11. Salcete ..	387	518	905	245	1,298	1,543	2,448	....	....	....	....	....	....
12. Mormugao ..	236	257	493	95	473	568	1,061	....	....	....	....	....	....

APPENDIX 7—concld.

Serial No. and District/Taluka	Livestock												Total Livestock
	Donkeys			Pigs									
				Male			Female			Total			
	Male	Female	Total	Below 6 months	6 months and over	Total	Below 6 months	6 months and over	Total	Below 6 months	6 months and over	Total	
1	76	77	78	79	80	81	82	83	84	85	86	87	88
1. Goa district	7	1	8	13,460	12,191	25,651	12,389	13,626	26,015	25,851	25,817	51,668	2,21,769
2. Tiswadi	....	....	....	1,917	1,646	3,563	1,891	1,891	3,782	3,808	3,537	7,345	16,586
3. Bardez	....	1	1	2,903	2,916	5,819	1,721	2,036	3.757	4,626	4,952	9,576	31,205
4. Pernem	....	....	....	745	584	1,329	731	784	1,515	1,476	1,368	2,844	21,603
5. Bicholim	....	....	....	49	58	107	36	46	82	85	104	189	16,927
6. Satari	....	....	..	10	13	23	11	10	21	21	23	44	14,995
7. Ponda	....	....	..	730	644	1,374	762	746	1,508	1,492	1,390	2,882	20,944
8. Sanguem	....	....	..	197	219	416	159	317	476	356	536	892	20,681
9. Canacona	7	..	7	681	478	1,159	776	667	1,443	1,457	1,145	2,602	15,144
10. Quepem	....	..	....	302	336	638	397	545	942	699	881	1,580	14,445
11. Salcete	....	....	....	5,200	4,780	9,980	5,209	5,947	11,156	10,409	10,727	21,136	41,291
12. Mormugao	....	....	....	726	517	1,243	696	637	1,333	1,422	1,154	2,576	7,948

APPENDIX 8

STATISTICS REGARDING POULTRY IN THE DISTRICT AS PER THE ELEVENTH QUINQUENNIAL LIVE STOCK CENSUS HELD IN 1972

Serial No./District/ Taluka	Poultry											
	Fowls											
	Cocks			Hens			Chicken			Total Fowls		
	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Goa District	39,430	5,095	44,525	1,39,672	22,061	1,61,733	96,645	15,149	1,11,794	2,75,847	42,303	3,18,150
2. Tswadi ..	2,741	834	3,575	13,789	5,015	18,804	7,431	3,359	10,790	23,961	9,208	33,169
3. Bardez ..	5,116	293	5,409	25,886	4,845	30,731	12,848	7,115	19,963	43,850	12,253	56,103
4. Pernem ..	5,289	39	5,428	10,829	397	11,226	13,845	262	14,107	3 0,063	698	30,761
5. Bicholim ..	2,143	20	2,163	5,467	119	5,586	6,549	150	6,699	14,159	289	14,448
6. Satari ..	2,645	64	2,709	4,877	411	5,288	6,799	78	6,877	14,321	553	14,874
7. Ponda ..	3,089	132	3,221	9,168	1,492	10,660	6,971	141	7,112	19,228	1,765	20,993
8. Sanguem ..	3,198	245	3,443	6,733	357	7,090	7,661	262	7,923	17,592	864	18,456
9. Canacona ..	2,761	36	2,797	5,066	538	5,604	6,021	21	6,042	13,848	595	14,443
10. Quepem ..	1,893	15	1,908	5,776	179	5,955	4,916	15	4,931	12,585	209	12,794
11. Salcete ..	8,963	3,325	12,286	44,586	7,432	52,018	19,833	3,272	23,105	73,382	14,027	87,409
12. Mormugao ..	1,592	92	1,684	7,495	1,276	8,771	3,771	474	4,245	12,858	1,842	14,700

APPENDIX 8—contd.

Serial No./District/ Taluka	Poultry—*concld.*													
	Ducks												Others	Total Poultry
	Ducks (Female)			Drakes (Ducks male)			Ducklings			Total				
	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total	Desi	Improved	Total		
1	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1. Goa District ..	842	34	876	455	16	471	274	1	275	1,571	51	1,622	57	3,19,829
2. Tiswadi ..	120	10	130	37	6	43	6	..	6	163	16	179	7	33,355
3. Bardez ..	351	18	369	246	7	253	229	1	230	826	26	852	3	56,958
4. Pernem ..	8	2	10	2	..	2	2	..	2	12	2	14	..	30,775
5. Bicholim ..	10	1	11	..	2	2	..	..	..	10	3	13	..	14,461
6. Satari ..	..	..	..	..	..	..	..	..	..	..	..	..	..	14,874
7. Ponda ..	13	..	13	7	..	7	1	..	1	21	..	21	17	21,031
8. Sanguem ..	2	..	2	..	..	..	2	..	2	4	..	4	..	18,460
9. Canacona ..	8	..	8	2	..	2	..	..	..	10	..	10	....	14,453
10. Quepem ..	2	..	2	3	..	3	..	..	..	5	..	5	..	12,799
11. Salcete ..	269	3	272	123	1	124	22	..	22	414	4	418	30	87,857
12. Mormugao ..	59	..	59	35	..	35	12	..	12	106	..	106	..	14,806

APPENDIX 9

INDUSTRIES RECOMMENDED FOR LOCATION IN GOA IN THE PERIOD 1963 TO 1975.

Industry	No. of units.	Additional capacity	Investment (Rs. lakhs)	Employment
Rice milling ..	..	40,000 tons	4.0	200
Cereal milling ..	..	....	2.0	100
Oil milling ..	4	3,600 tons of oil	8.0	100
Solvent extraction of oil cake and rice bran.	1	30 tons per day	7.0	80
Coir industry ..	2	3,000 tons.	2.0	200
Fruit preservation ..	2	Rs. 10 lakhs worth	6.0	40
Chrome tanning ..	1	Rs. 7 lakhs worth	4.0	100
Footwear ..	4	....	4.0	160
Bone mills ..	5	Rs. 50,000 worth	0.3	15
Saw mills ..	4	4,000 cu. metres	3.2	100
Wood seasoning ..	4	4,000 cu. metres	2.8	60
Joinery plants ..	2	Rs. 6 lakhs worth	6.0	80
Stationery articles ..	2	Rs. 3 lakhs worth	0.6	60
Paper and pulp ..	1	60,000 tons	12,00.0	2,500
Roofing tiles and bricks ..	4	Rs. 8 lakhs worth	4.0	160
China-clay washing ..	1	....	0.5	50
Steel plant ..	1	2.0 mil. tons	350,00.0	15,000
Pig iron ..	3	500.000 tons	18,00.0	2,800
Textile mills ..	2	50,000 spindles 1,000 looms.	500.0	1,000
Explosives ..	1	5,000 tons	500.0	500
Soap ..	3	1,200 tons	6.0	180
Paints and varnishes ..	2	3,000 tons	10.0	100
Welding electrodes ..	1	30 mil. ft.	40.0	75
Cast iron pipes ..	1	10,000 tons	25.0	200
Grey iron castings ..	2	6,000 tons	24.0	120
Structural fabrication ..	2	10,000 tons	36.0	400
Hand tools ..	3	1,080 tons	7.5	300
Bolts and nuts ..	2	1,000 tons	10.0	200
Automobile batteries ..	4	....	1.0	20
Leaf springs ..	2	12,000 nos.	10.0	200
Other small-scale industries	—	....	266.1	6,750
Total ..	..	....	394,90.0	31,850

APPENDIX 10

A LIST GIVING THE NAMES OF BANKS, THEIR LOCATION AND THE DATE OF ESTABLISHMENT IN THE DISTRICT OF GOA TILL DECEMBER, 1976.

Name of the Bank	Location	Head Office/ Branch Office/ Sub Office.	Date of establishment.
State Bank of India	Panaji	B.O.	2-1-1962
State Bank of India	Vasco-da-Gama	B.O.	14-2-1962
State Bank of India	Margao	B.O.	21-2-1962
State Bank of India	Mapusa	B.O.	24-2-1962
State Bank of India	Sanvordem	B.O.	3-10-1963
State Bank of India	Ponda	B.O.	10-2-1965
State Bank of India	Bicholim	B.O.	18-11-1965
State Bank of India	Canacona	S.O.	30-3-1968
State Bank of India	Calanguto	B.O.	9-12-1968
State Bank of India	Siolim	B.O.	16-12-1968
State Bank of India	Assolna	S.O.	16-3-1970
Bank of India	Vasco-da-Gama	B.O.	7-3-1962
Bank of India	Margao	B.O.	6-4-1962
Bank of India	Porvorim	B.O.	30-11-1966
Bank of India	Panaji	B.O.	12-12-1966
Bank of India	Saligao	B.O.	26-8-1968
Bank of India	Chinchinim	B.O.	6-11-1968
Bank of India	Shiroda	B.O.	1-1-1969
Bank of India	Velim	B.O.	3-4-1969
Bank of India	Mapusa	B.O.	16-7-1969
Bank of India	Bordem	B.O.	25-7-1969
Bank of India	Quepem	B.O.	25-8-1969
Bank of India	Sanvordem	B.O.	18-11-1969
Bank of India	Taleigao	B.O.	27-12-1969
Bank of India	Aquem	B.O.	25-2-1970
Bank of India	Colem	B.O.	20-8-1970
Bank of India	Carambolim	B.O.	31-8-1970
Bank of Baroda	Margao	B.O.	26-10-1964
Bank of Baroda	Panaji	B.O.	5-12-1966
Bank of Baroda	Cuncolim	B.O.	4-1-1967
Bank of Baroda	Majorda	B.O.	27-2-1969
Bank of Baroda	Anjuna	B.O.	7-5-1969
Bank of Baroda	Cortalim	B.O.	7-5-1969
Bank of Baroda	Guirim	B.O.	7-5-1969
Bank of Baroda	Benaulim	B.O.	29-5-1969
Bank of Baroda	Morgim	B.O.	27-8-1969
Bank of Baroda	Vasco-da-Gama	B.O.	27-5-1973
Bank of Baroda	Navelim	B.O.	29-4-1976
Bank of Baroda	Colvale	B.O.	19-12-1976

APPENDIX 10—contd.

Name of Bank	Location	Head Office/ Branch Office/ Sub Office.	Date of establishment.
Bank of Maharashtra	Panaji	B.O.	1-5-1963
Bank of Maharashtra	Margao	B.O.	1-5-1963
Bank of Maharashtra	Vasco-da-Gama	B.O.	11-12-1974
Bank of Maharashtra	Mapusa	B.O.	18-12-1975
Belgaum Bank	Ponda	B.O.	26-1-1965
Canara Bank	Vasco-da-Gama	B.O.	18-2-1963
Canara Bank	Panaji	B.O.	1-4-1963
Canara Bank	Margao	B.O.	21-3-1966
Canara Bank	Marcela	B.O.	3-10-1968
Canara Bank	Candolim	B.O.	3-10-1968
Canara Bank	Old Goa	B.O.	18-11-1968
Canara Bank	Calapur	B.O.	21-11-1968
Canara Bank	Assonora	B.O.	22-11-1968
Canara Bank	Mapusa	B.O.	20-2-1969
Canara Bank	Bicholim	B.O.	21-2-1969
Canara Bank	Cansaulim	B.O.	26-2-1969
Canara Bank	Chandor	B.O.	27-2-1969
Canara Bank	Aldona	B.O.	24-4-1969
Canara Bank	Sanquelim	B.O.	17-7-1969
Canara Bank	Panaji	B.O.	9-10-1975
Canara Bank	Mandrem	B.O.	18-5-1976
Canara Bank	Fatorda	B.O.	17-12-1976
Central Bank of India	Panaji	B.O.	10-6-1963
Central Bank of India	Mapusa	B.O.	27-11-1964
Central Bank of India	Pernem	B.O.	25-1-1966
Central Bank of India	Margao	B.O.	10-10-1966
Central Bank of India	Valpoi	B.O.	15-2-1967
Central Bank of India	Curtorim	B.O.	5-5-1968
Central Bank of India	Chorao	B.O.	13-4-1969
Central Bank of India	Vasco-da-Gama	B.O.	17-4-1969
Central Bank of India	Divar Piedade (Divadi)	B.O.	28-4-1969
Central Bank of India	Assagao	B.O	16-6-1969
Central Bank of India	Raia	B.O.	4-8-1969
Central Bank of India	Verna	B.O.	21-11-1970
Central Bank of India	Carmona	B.O.	30-11-1970
Central Bank of India	Rivona	B.O.	30-11-1970
Central Bank of India	Cuncolim	B.O.	4-1-1971
Central Bank of India	Borda (Salcete)	B.O.	28-11-1976
Central Bank of India	Cacora	B.O.	26-12-1976
Chartered Bank	Vasco-da-Gama	S.B.O.	4-4-1963
Dena Bank	Panaji	B.O.	19-10-1964
Dena Bank	Aldona	B.O.	23-4-1967
Dena Bank	Ponda	B.O.	24-4-1967
Dena Bank	Pilar (Santo Andre)	B.O.	28-1-1969

APPENDIX 10—contd.

Name of Bank	Location	Head Office/ Branch Office/ Sub-Office	Date of establishment
Dena Bank	Tivim	B.O.	30-1-1969
Dena Bank	Loutulim	B.O.	31-1-1969
Dena Bank	Pomburpa	B.O.	28-3-1971
Dena Bank	Margao	B.O.	31-3-1975
Goa State Co-operative Bank	Panaji	H.O.	2-2-1964
Goa State Co-operative Bank	Ponda	B.O.	6-6-1964
Goa State Co-operative Bank	Mapusa	B.O.	30-7-1964
Goa State Co-operative Bank	Margao	B.O.	20-9-1964
Goa State Co-operative Bank	Vasco-da-Gama	S.O.	7-11-1965
Goa State Co-operative Bank	Pernem	S.O.	2-12-1965
Goa State Co-operative Bank	Sanquelim	S.O.	20-12-1965
Goa State Co-operative Bank	Canacona	S.O.	28-2-1966
Goa Urban-Co-operative Bank	Panaji	H.O.	9-8-1964
Goa Urban Co-operative Bank	Margao	B.O.	8-10-1967
Goa Urban Co-operative Bank	Ponda	B.O.	29-10-1969
Goa Urban Co-operative Bank	Curchorem	B.O.	19-7-1970
Mapusa Urban Co-operative Bank Ltd.,	Mapusa	H.O.	23-3-1966
Mapusa Urban Co-operative Bank Ltd.	Siolim	B.O.	1-11-1971
Mapusa Urban Co-operative Bank Ltd.,	Sanquelim	B.O.	16-3-1972
Mapusa Urban Co-operative Bank Ltd.,	Calangute	B.O.	19-9-1976
Mapusa Urban Co-operative Bank Ltd.,	Velguem	B.O.	20-11-1976
Women's Co-operative Bank Ltd.	Panaji	H.O.	5-5-1973
Indian Overseas Bank	Panaji	B.O.	14-9-1967
Indian Overseas Bank	St. Estevam	B.O.	30-10-1968
Indian Overseas Bank	Vasco-da-Gama	B.O.	31-7-1969
Indian Overseas Bank	Corlim	B.O.	29-1-1970
Syndicate Bank	Sanquelim	B.O.	31-3-1963
Syndicate Bank	Sanvordem	B.O.	29-5-1963
Syndicate Bank	Betim	B.O.	16-3-1966
Syndicate Bank	Panaji	B.O.	25-4-1966
Syndicate Bank	Pale	B.O.	30-8-1968
Syndicate Bank	Mapusa	B.O.	10-11-1968
Syndicate Bank	Navelim	B.O.	21-11-1968
Syndicate Bank	Caranzalem	B.O.	12-2-1969
Syndicate Bank	Agasaim	B.O.	12-2-1969
Syndicate Bank	Queula	B.O.	2-4-1969
Syndicate Bank	Vasco-da-Gama	B.O.	7-4-1969
Syndicate Bank	Merces	B.O.	8-4-1969
Syndicate Bank	Ribandar	B.O.	20-5-1969
Syndicate Bank	Salvador do Mundo	B.O.	29-12-1976

APPENDIX 10—concld.

Name of Bank	Location	Head Office/ Branch Office/ Sub-Office	Date of establishment
Union Bank of India ..	Panaji ..	B.O. ..	4-3-1965
Union Bank of India ..	Margao ..	B.O. ..	12-7-1967
Union Bank of India ..	Sanguem ..	B.O. ..	14-7-1967
Union Bank of India ..	Vasco-da-Gama	B.O. ..	26-11-1976
United Commercial Bank ..	Vasco-da-Gama	B.O. ..	3-7-1963
United Commercial Bank ..	Panaji ..	B.O. ..	14-11-1964
United Commercial Bank ..	Margao ..	B.O. ..	30-8-1967
United Commercial Bank ..	Mardol ..	B.O. ..	18-11-1968
State Bank of Mysore ..	Candeapar ..	B.O. ..	16-7-1973
Vijaya Bank ..	Panaji ..	B.O. ..	16-4-1973
Vijaya Bank ..	Margao ..	B.O. ..	6-12-1976
Indian Bank .. .	Panaji ..	B.O. ..	6-9-1974
Karnataka Bank ..	Panaji ..	B.O. ..	9-10-1975
Karnataka Bank ..	Margao ..	B.O. ..	30-12-1976
United Western Bank Ltd., Satara	Panaji ..	B.O. ..	8-10-1975
Federal Bank Ltd. ..	Margao ..	B.O. ..	20-12-1975
Oriental Bank of Commerce ..	Panaji ..	B.O. ..	17-11-1975
Corporation Bank Ltd. ..	Mapusa ..	B.O. ..	4-9-1976
Margao Urban Co-operative Bank	Margao ..	H.O. ..	1-10-1972
Margao Urban Co-operative Bank	Sanguem ..	B.O. ..	31-3-1976

APPENDIX 11

BLOCKWISE INFORMATION OF SERVICE CO-OPERATIVE SOCIETIES (AS ON 30TH JUNE, 1971).

(Amount in thousand)

Block	Coverage of Villages and Population				Capital	
	No. of societies	Villages covered	No. of families	Population covered (No. of families 5)	Members	Government
1	2	3	4	5	6	7
Margao (Salcete) ..	31	47	27,111	1,35,555	177	154
Bicholim ..	17	31	10,168	50,840	78	72
Canacona ..	5	9	4,200	21,000	30	24
Pernem ..	15	27	7,319	36,595	61	58
Quepem ..	13	23	6,511	32,555	43	40
Ponda .	17	42	11,236	56,180	138	92
Satari .	12	79	4,337	21,685	66	50
Bardez ..	26	48	22,131	1,10,655	115	134
Panaji ..	13	18	10,085	50,425	79	65
Sanguem ..	11	52	7,502	37,510	53	48
Total ..	160	376	1,10,600	5,53,000	840	737

Agricultural loan operation			Business Operations		Profit		Loss	
Loan advanced to members during the year	Outstanding with member as on 30-6-71	Over-due as on 30-6-71	Sales of agricultural requisites	Sales of consumer goods	No. of societies	Amount	No. of societies	Amount
8	9	10	11	12	13	14	15	16
65	96	49	224	3,679	14	19	17	38
120	224	161	104	1,564	5	6	12	15
77	120	66	70	226	3	3	2	4
60	171	123	200	501	4	4	10	9
19	61	57	70	452	5	2	7	4
405	334	147	187	1,976	7	7	10	12
234	349	238	62	654	..	..	12	23
113	149	62	80	3,041	7	7	19	26
42	105	74	118	769	3	1	10	11
205	190	73	164	482	4	3	7	7
1,340	1,799	1,050	1,279	13,344	52	52	106	149

Note.— (*i*) The figure of population (in col. 5) is derived by taking a family as consisting of 5 members on average.

(*ii*) The figure of villages (in col. 3) is according to Revenue villages.

APPENDIX 12

TOTAL OUTSTANDING INVESTMENTS IN THE NATIONAL SAVINGS CERTIFICATES IN PANAJI HEAD POST OFFICE.

Scheme		Issued	Discharged	
			Principal	Interest
7 years National Savings Certificates	1969-70	....	....	....
	1970-71	8,53,060.00	....	....
	1971-72	11,12,280.00	....	....
10 years National Savings Certificates	1969-70	3,18,540.00	93,620.00	12,447.70
	1970-71	....	1,16,630.00	15,807.45
	1971-72	....	1,99,230.00	39,217.55
12 years National Savings Certificates	1969-70	....	6,28,825.00	3,47,654.70
	1970-71	...	5,49,955.00	6,80,310.00
	1971-72	....	6,80,310.00	4,07,162.09
12 years National Defence Certificates	1969-70	3,80,970.00	3,75,800.00	2,780.00
	1970-71	..	13,60,330.00	2,78,049.25
	1971-72	....	11,47,220.00	3,23,068.65

TOTAL OUTSTANDING INVESTMENTS IN THE NATIONAL SAVINGS CERTIFICATES IN MARGAO HEAD POST OFFICE.

Scheme		Issued	Discharged	
			Principal	Interest
7 years National Savings Certificates ..	1969-70	....	....	....
	1970-71	6,44,000.00	....	....
	1971-72	9,67,230.00	....	....
10 years National Savings Certificates	1969-70	1,95,250.00	26,135.00	3,475.57
	1970-71	....	61,080.00	8,481.00
	1971-72	....	49,810.00	10,679.35
12 years National Savings Certificates	1969-70	...	41,465.00	20,369.99
	1970-71	...	26,210.00	22,540.93
	1971-72	....	15,170.00	11,448.42
12 years National Defence Certificates	1969-70	1,12,295.00	17,845.00	42,500.20
	1970-71	....	4,15,700.00	76,788.75
	1971-72	....	4,53,520.00	1,11,318.50
12 years National Plan Savings Certificates	1960-70	....	3,72,753.00	1,60,882.25
	1970-71	....	4,92,450.00	28,525.11
	1971-72	....	5,21,665.00	3,27,921.81
10 years National Defence Certificates	1969-70	....	2,510.00	1,487.00
	1970-71	....	....	....
	1971-72	....	1,000.00	703.76

APPENDIX 12—contd.

OUTSTANDING INVESTMENTS IN CUMULATIVE TIME DEPOSITS, TIME DEPOSITS, RECURRING DEPOSITS, FIXED DEPOSITS AND COMPULSORY DEPOSITS IN PANAJI HEAD POST OFFICE.

Scheme		No. of accounts	Amount Rs.
5 years Cumulative Time Depostis	1969-70	4,337	3,13,017.43
	1970-71	4,507	3,46,398.41
	1971-72	4,984	3,42,582.64
10 years Cumulative Time Deposits	1969-70	789	1,75,294.00
	1970-71	875	2,12,408.15
	1971-72	937	2,79,229.00
15 Years Cumulative Time Diposits	1969-70	204	30,800.00
	1970-71	235	41,065.00
	1971-72	242	53,360.00
Time Deposits	1969-70	....	....
	1970-71	9	14,75,110.00
	1971-72	43	30,57,290.00
Recurring Deposits	1969-70	....	....
	1970-71	404	18,090.00
	1971-72	353	93,100.00
Fixed Deposits	1969-70	18	62,550.00
	1970-71	27	1,03,250.00
	1971-72	28	1,00,950.00
Compulsory Deposits	1969-70	82	13,077 00
	1970-71	57	8,374.00
	1971-72	50	6,630.00

OUTSTANDING INVESTMENTS IN CUMULATIVE TIME DEPOSITS, TIME DEPOSITS, RECURRING DEPOSITS AND FIXED DEPOSITS IN MARGAO HEAD POST OFFICE.

Scheme		No. of accounts	Amount Rs.
5 years Cumulative Time Deposits	1969-70	3,614	6,62,795.00
	1970-71	3,577	8,77,630.00
	1971-72	3,625	11,23,525.00
10 years Cumulative Time Deposits	1969-70	826	3,49,945.00
	1970-71	867	4,34,790.00
	1971-72	929	5,81,605.00
15 years Cumulative Time Deposits	1969-70	176	57,615.00
	1970-71	188	76,705.00
	1971-72	202	1,44,290.00
Time Deposits	1969-70	....	....
	1970-71	12	35,200.00
	1971-72	73	2,56,850.00
Recurring Deposits	1969-70	....	....
	1970-71	159	6,300.00
	1971-72	745	49,315.00
Fixed Deposits	1969-70	27	81,100.00
	1970-71	53	1,39,750.00
	1971-72	55	1,46,150.00

APPENDIX 13

IMPORTANT FAIRS IN GOA DISTRICT

Taluka	Village/town in which it is held.	Name of the fair/ occasion of the fair.	Day/month on which it is held.	Approximate number of persons attending the fair.	Approximate number of traders.	Chief commodities sold.
1	2	3	4	5	6	7
Tiswadi ..	Panaji ..	Maruti-jatra ..	January/February ..	10,000	200	Sweets and copper-pots.
		Candia	3rd February ..	7,000	100	Chairs and furniture.
		Feast of Ascension ..	16th May ..	10,000	200	Copper-pots, onion and chillies.
		Ashtami	August ..	7,000	200	Copper-pots, and furniture.
		Feast of the Immaculate Conception.	8th December ..	10,000	200	Sweets, stationery articles.
	Caranzalem ..	Feast of St. Peter ..	29th June ..	1,000	20	Sweets, etc.
		Feast of St. Francis ..	20th December ..	2,000	15	Sweets, etc.
	Ribandar ..	Jesus Feast ..	7th January ..	2,000	15	Sweets, etc.
		Nastarichem feast ..	10th February ..	1,500	10	Sweets, etc.
	Dona Paula ..	Feast of the Assumption	15th August ..	1,000	6	Sweets, etc.
	Golti-Piedade ..	Feast of Our Lord Redeemer.	3rd November ..	550	6	Sweets, etc. and toys.
	St. Andre ..	Procession of Saints ..	29th March ..	7,000	150	Sweets, onions and chillies
	Siridao ..	Feast of Jesus of Nazareth.	25th April ..	10,000	250	Sweets, onions, copper and iron utensils.
	Taleigao ..	Novem feast ..	21st August ..	1,000	8	Sweetmeats.
		St. Michael's feast ..	5th October ..	800	12	Sweetmeats.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Tiswadi—*contd.*	Carambolim ..	Shigmo	March/April ..	1,500	..	Sweetmeats.
		Kamladevi jatra ..	April ..	1,500	..	Sweetmeats.
	St. Bras ..	Feast of the Immaculate Conception.	8th December ..	150	5	Sweetmeats.
		Feast of St. Bras ..	3rd February ..	100	3	Sweetmeats.
		Santissimo Feast ..	24th May ..	125	3	Sweetmeats.
	St. Estevam (Jua) ..	Feast of St. Stephen ..	1st March ..	500	25	Condiments, etc
	Agasaim ..	Feast of St. Lawrence ..	10th August ..	500	3	Eatables, grams, etc.
		Feast of Our Lady of the Mount.	8th September ..	300	2	Eatables, grams, etc.
		Feast of Our Lady of Perpetual Succour.	10th November ..	600	10	Eatbles, grams, etc.
		Feast of the Blessed Sacrament.	April ..	1,000	10	Eatables, grams, etc.
	Curca ..	Feast of Our Lady of the Rosary.	7th October ..	200	8	Grams, toys and sweetmeats.
	Calapur (St. Crus)	Feast of Our Lady of the Rosary.	24th January ..	2,000	100	Grams, toys and sweetmets
		Feast of the Holy Cross	9th May ..	4,000	150	House commodities and sweets.
	Dongri ..	Etruz-jatra	January ..	900	25	Metal pots, cosmetics and sweets.
	Old Goa ..	Feast of St. Francis Xavier.	3rd Decemger ..	20,000	200	Sweets, stationery, furniture, copper-pots, ready-made garments etc.

Salcete	Margao	Feast of the Holy Spirit	May	30,000	100	Furniture, sweets, toys, tools, dry fish, etc.
		Feast of Our Lady of Immaculate Conception.	8th December	20,000	80	Furniture, sweets, toys, tools, dry fish, etc.
		Dindi	November	10,000	10	Sweets, toys, pan-bidis.
	Verna	Feast of St. Michael the Archangel.	31st January	1,500	26	Sweets. etc.
		Feast of Our Lady of Guia.	November	900	15	Sweets, etc.
		Feast of St. Roque	August	800	12	Sweets, etc.
		Feast of St. Sebastian	February	400	6	Sweets, etc.
	Verna	Feast of Our Lady of the Rosary.	October	350	7	Sweets, etc.
		Feast of St. Lume	December	300	6	Swets, etc.
		Feast of Our Lady of Necessity.	January	700	6	Sweets, etc.
	Nagve	Feast of Our Lady of Perpetual Succour.	December	1.300	9	Sweets, etc.
		Feast of Our Lady of Piety.	October	900	7	Sweets, etc.
	Malem	Jatra		1,000	....	Sweets, etc.
	Paroda	Feast of Our Lady of Immaculate Conception.	December	2,000	....	Sweets, etc.
		Dassara	October	1,000	....	Sweets, etc.
		Shigmo	March	1,000	....	Sweets, etc.
	Velim	Feast of Mount Mary	8th September	2,000	35	Earthenpots, sweets, grains, toys, cold drinks, etc.
		Feast of St. Francis Xavier.	3rd December	2,500	40	Copper, utensils, earthen pots, grains, sweets, toys, cold drinks, etc.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Salcete—*contd.*		Feast of Our Lady of Immaculate Conception.	8th December	1,500	40	Copper utensils, earthen pots, grains, sweets, toys, cold drinks, etc.
	Bardi-Velim	Feast of Holy Cross	3rd May	1,500	20	Grains, sweets, toys cold drinks, etc.
	Cumbebat-Velim	Feast of Holy Cross	10th May	600	15	Grains, sweets, toys, cold drinks, etc.
	Toleconto-Velim	Feast of St. Roque	31st October	1,500	20	Grains, sweets, toys, cold drinks, etc.
	Loutulim	Carnival	February/March	2,500	30	Iron utensils, earthen pots, eatables, etc.
		Feast of St Sebastian	January	2,500	40	Iron utensils, earthen pots, eatables, etc.
		Harvest Feast	August	1,500	30	Iron utensils, earthen pots, eatables, etc.
	Ambora	Church Feast	12th November	1,000	15	Sweets, toys, iron utensils, earthen pots, etc.
	Cavelossim	Feast	3rd May	500	15	Sweets, toys.
	Varca	Feast	May	400	4	Sweets and earthenware.
		Feast	November (2nd Sunday)	200	2	Sweets and earthenware.
		Feast	27th November	300	4	Sweets and earthernware.
	Raia	Feast of Our Lady of Safe Delivery.	January	300	20	Sweets and pottery.
		Easter	February/March	200	15	Sweets and grams.
	Rachol	Jesus Feast	1st January	300	15	Sweets, etc.

Curtorim	St. Alex Festa	17th July	1,500	9	Sweets and toys.
	Santos passos	March/April	2,500	20	Sweets, toys, clay pots and metal utensils.
	Feast of Our Lady of Guadalupe.	18th December	2,500	12	Sweets, toys, clay pots and metal utensils.
Betalbatim	Feast of St. Bartholomeu	August	500	8	Earthenpots, grams, sweets, etc.
	Feast of Our Lady of Remedies.	January	500	8	Earthenpots, grams, sweets, etc.
Colva	Feast of Infant Jesus	October	10,000	100	General commodities.
	Feast of Our Lady of Perpetual Succour.	February	3,000	75	Sweets, grams, toys.
Consua	Feast of Christ the King	November	200	8	Sweets, grams, toys, etc.
Cuncolim	Saude Fair.	February	15,000	200	General commodities.
St.Jose de Areal	Blessed Sacrament	May	1,200	30	Sweets, drinks, etc.
	Santos Passos	March	2,500	40	Sweets, drinks, etc.
	St. Joseph Feast	October	1,000	20	Sweets, drinks, etc.
Macasana	Feast of Baby Jesus	1st January	1,500	7	Toys and sweets.
	Feast of Our Lady of Glory.	February/March	1,500	7	Toys and sweets.
	Feast of St. Francis Xavier	December	1,000	5	Toys and sweets.
Chinchinim	Mount Mary Feast	8th September	5,000	100	Furniture pots and meat.
Deussua	St. Anthony's Feast	June	2,500	50	Furniture, pots and meat.
Navelim	Feast of Our Lady of the Rosary.	November	15,000	200	General commodities.
Dramapur	Feast of St. Joseph	October	2,000	25	Eatables, sweets, toys, etc.
Sirlim	Feast of Our Lady of Mercy.	October	1,200	20	Eatables, sweets, toys, etc.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Salcete—concld.	Majorda	Feast of Our Lady of Miracles.	February/March	1,500	10	Sweets, pottery.
		Mae de Deus Feast	April	1,000	6	Sweets.
		Feast of Our Lady of Boa Morte.	October	2,500	25	Sweets and furniture.
	Utorda	Feast of Our Lady of Lourdes.	November	4,000	40	Sweets and copper utensils.
	Calat	Feast of St. Roque	December	1,000	10	Sweets.
	Ambelim	Feast of Our Lady of Lourdes	February	1,500	10	Toys, grams, sweets and cold drinks.
	Assolna	Feast of St. Joseph	October	800	30	Sweets, and earthenware
		Feast of Our Lady of Martyrs.	November	1,000	40	Sweets, drinks, pottery utensils, stationery, etc.
Bardez	Mapusa	Feast of Our Lady of Miracles.	April/May	6,000	100	General commodities.
		Bodgeshwari Jatra	February/March	10,000	100	General commodities.
		Hanuman jayanti	April/May	2,000	20	Sweets, toys, etc.
		Dattatraya Jayanti	December/January	2,000	15	Sweets, toys, etc.
	Corlim	Shanteri jatra	March	2,000	20	Sweets, toys, etc.
	Guirim	Feast of Our Lady of Assumption.	15th August	1,000	8	Sweets, toys, etc.
	Tivim	Feast of Shanteri	8th February	2,000	20	Sweets, toys, etc.
		Church Feast	May	6,000	10	Sweets, toys, etc.
	Reis Magos	Feast of Three Kings	January	3,000	50	General commodities.
	Pomburpa	Feast of N. S. de Candelaria.	2nd February	3,000	50	General commodities.

	Siolim	Feast of N.S.de Guiva	December	1,500	30	General commodities.
		Feast of St. Anthony	June	1,000	20	Sweets, toys, etc.
	Calangute	Church Feast	8th December	3,000	50	Sweets, toys, etc.
	Aldona	Church Feast	May	3,000	50	Sweets, toys, etc.
	Pirna	Shantadurga jatra	December/January	1,000	10	Sweets, toys, etc.
	Colvale	Ram Navami	April/May	1,000	10	Sweets, toys, etc.
	Parra	Feast of St. Anne	2nd February	1,000	10	Sweets, toys, etc.
	Saligao	Mae de Deus Feast	May	2,000	15	Sweets, toys, etc.
	Pilerne	Church Feast	February	1,000	8	Sweets, toys, etc.
	Assagao	Church Feast	7th August	1,000	10	Sweets, toys, etc.
	Caisua-Anjuna	Siddeshwar jatra	March	400	8	Sweets, toys, etc.
	Anjuna	Church Feast	January	400	8	Sweets, toys, etc.
Mormugao	Bodga-Mormugao	Feast of Our Lady of Desterro.	January	3,000	30	Sweets, toys, etc.
	Headland-Mormugao	Holi Shigmo	March	300	10	Sweets, toys and tea.
	Mormugao Harbour	Feast of St. Francis Xavier.	December	5,000	50	Sweets and tea.
	Vasco-da-Gama	Feast of Bom Jesus	January	3,000	10	Sweets, toys, etc.
		Feast of N. S. de Guiva	February	1,500	5	Sweets, toys, etc.
		Saptaha.	August	7,000	100	Sweets, furniture, steel and other household utensils.
	Bogmallo	St. Cosme and Damian Feast.	March/April	1,000	20	Sweets, groundnuts, cold drinks.
	Sancoale	Feast of Ven. Pe. Jose Vaz.	January 16th	5,000	80	Condiments, sweetmeats, earthenware and metal pots.
	Chicalim	St. Francis Xavier's feast	3rd December	200	4	Sweets and toys.
		Feast of Our Lady of Immaculate Conception.	8th December	200	4	Sweets and toys.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Mormugao—*contd.*	St. Jacinto	Feast of St. Jacinto	September	150	2	Sweets.
	Consua	Febre Saibiniche Feast	24th January	7,000	100	Wooden and iron domestic and agricultural utensils, earthenpots, sweets, toys etc.
	Cortalim	Feast of Our Lady of Assumption.	15th August	5,000	25	Earthenpots, sweets, toys etc.
		Livramento Saibin Gotam Feste.	21st November	7,000	30	Earthenpots, sweets, toys etc.
	Quelossim	Enferme Saibiniche feast.	26th December	3,000	25	Sweets, toys, earthenpots etc.
	Velsao	Feast of Our Lady of Assumption.	August	1,000	13	Sweets and toys.
		Feast of Our Lady of Perpetual Succour.	November	1,000	13	Sweets and toys.
		Feast of Velsao	November and August.	500	50	Sweets, grams etc.
	Pale	Feast of St. Stephen	26th January	600	....	Sweets and vegetables seeds.
		Chapel Feast	26th December	1,000	30	Sweets, grams, vegetables seeds, etc.
	Cuelim	Feast of Our Lady of Mount Remedios.	6th January	5,000	70	Eatables, cold drinks, toys, pots, liquor, flowers, wooden ware, bangles and novelty articles.

	Cansaulim	Feast of Our Lady of Boa Morte.	2nd February	800	15	Eatables, cold drinks, toys etc.
		Feast of Our Lady of Boa Vida.	October	1,000	10	Eatables, cold drinks, toys etc.
		Feast of St. Thomas	21st October	1,500	10	Eatables, cold drinks, toys etc.
	Arrosim	Feast of St. Lawrence	10th August	200	10	Eatables, cold drinks etc.
Ponda	Mangeshi (Priol)	Mangesh Jatra	February/March	15,000	100	Sweets, stationery, flowers, utensils etc.
	Queula	Shantadurga Jatra	February/March	15,000	100	Sweets, stationery, flowers, toys, utensils etc.
		Kapileshwari Jatra	October/November	5,000	25	Flowers, sweets, stationery, toys etc.
	Mhardol	Mahalasa jatra	March	10,000	50	Toys, snacks, flowers, stationery etc.
		Kojagiri Purnima	October	5,000	10	Tea, snacks.
	Bandora	Nagesh jatra	October/November	7,000	35	Flowers, utensils, toys, snacks etc.
		Chaitri-Purnima	March/April	3,000	20	Sweets, stationery, flowers etc.
		Mahashivaratri	February/March	5,000	30	Tea, snacks, flowers, stationery etc.
	Borim	Navadurga jatra	November/December	5,000	30	Flowers, tea, snacks, stationery etc.
		Chaitri Purnima	March/April	5,000	25	Tea, snacks, stationery, toys etc.
	Marcela	Devakikrishna jatra	December/January	5,000	30	Flowers, stationery, toys, snacks etc.
	Cundaim	Navadurga jatra	November/December	5,000	30	Sweets, stationery, toys, snacks etc.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Ponda—*contd.*	Velinga	Narasinha jatra	April/May	5,000	30	Tea, snacks, flowers, stationery etc.
	Ponda	Urs of Shah Abdullah Shah.	February	3,000	N.A.	N.A.
	Volvoi	Jatra or Kala	November	200	10	Sweets and stationery.
		Shigmo	March	500	10	Sweets and stationery.
	Savoi-Verem	Shigmo	March	1,000	5	Sweets and stationery.
		Vasant puja	....	2,000	5	....
		Kalo	....	2,000	10	Sweets and stationery.
	Vagurbem	Kalo	.	1,000	5	Sweets and stationery.
	Querim	Mahashivatra	February	1,000	20	Sweets, flowers, tea, cutlery etc.
		Jatra	November	1,000	20	Sweets, flowers, cutlery etc.
		Jatra	December	1,000	20	Sweets, flowers, cutlery etc.
		Gamalu puja jatra	February	1,000	10	Sweets, flowers, cutlery etc.
	Marcaim	Navadurga jatra	November	5,000	25	Sweets, tea, copper and other utensils, toys etc.
		Jatra	March/April	7,000	8	Tea and pan bidi.
	Siroda	Shivratra	February	3,000	35	Sweets.
		Dassara	October	3,000	25	Sweets.
		Shiddi-paurnima	December	2,000	15	Sweets.
		Church feast	May	1,500	15	Sweet things and furniture.
		Shigmo	March	1,000	3	Sweets, flowers etc.
		Ratha-Sapthami	February	300	5	Sweets.
	Candeapar	Jatra	....	2,000	10	Sweets, flowers, stationery etc.

Bicholim	Bicholim	Mahamaicho-Kalo	November	2,000	10	Tea, sweets etc.
		New Monday	November	3,000	15	Pan, bidi, sweets etc.
	Maem	Malyanchi-jatra	March	5,000	25	Tea, sweets, snacks, brass and aluminium utensils, stationery etc.
	Vainguinim	Khetobachi-jatra	November	700	10	Tea, sweets, snacks, brass and aluminium utensils, stationery etc.
	Piligao	Shantadurga Kalo	November	700	14	Tea, sweets, snacks, brass and aluminium utensils, stationery etc.
	Naroa	Gokul Ashtami	August	2,000	50	Sweets, snacks, brass and aluminium utensils, stationery etc.
	Mencurem	Mauicho Kalo	November	700	5	Tea, snacks, sweets etc.
	Salem	Gade	April	3,000	10	Tea, snacks, drinks brass and aluminium utensils, stationery etc.
	Latambarcem	Satericho Kalo	December	1,000	5	Tea, snacks, brass and aluminium utensils etc.
		Shigmo	March/April	5,000	10	Tea, sweets, flowers, stationary etc.
	Mulgao	Kelbai jatra	December	800	5	Tea, snacks, brass and aluminium utensils etc.
	Adwalpale	Sharvani-Satpurush Kalo	November	1,000	5	Tea, snakcs, brass and aluminium utensils etc.
	Sirigao	Lairai jatra	April/May	20,000	200	Tea, snacks, brass and aluminium utensils, stationery, sweets etc.
	Carapur	Lakshmicho Kalo	November	1,000	5	Tea, sweets etc.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Bicholim—*contd.*	Sarvona	Shyampurush Kalo	November	1,000	5	Tea, sweets, etc.
	Sanquelim	Chaitri Paurnima	April	7,000	50	Stationery, sweets, clothes, flowers, etc.
		Datta Jayanti	December	10,000	20	Stationery, sweets, clothes, flowers, etc.
	Cudnem	Kudneshwar jatra	December	5,000	5	Tea, snacks, sweets, etc.
	Nevelim	Lakshminarayan Kalo	December	1,000	2	Tea, snacks, sweets, etc.
	Amona	Dassara	November	5,000	30	Tea, sweets, utensils, stationery, etc.
Pernem	Pernem	Church Feast	January	600	5	General commodoties.
		Bhagvati Devi jatra (Dassara)	October	6,000	30	Sweets, toys, stationery, utensils, flowers, etc.
	Arambol	Bhumika Devi jatra	November	1,800	10	Tea, sweets, toys, stationery, etc.
		Ravalnath Deva jatra	December	2,000	15	Tea, sweets, toys, stationery, etc.
		Narayan Deva jatra	December	1,800	12	Sweets, toys, stationery, etc.
		Church Feast	January	2,000	10	Sweets, toys, stationery, etc.
	Paliem	Bhumika Devi jatra	November	1,200	12	Tea, sweets, staticnery, etc.
		Vetal jatra	December	1,500	15	Sweets, toys, stationery, etc.
	Querim	Ravalnath Deva jatra	December	2,000	15	Sweets, toys, stationery, etc.
		Ajobadeva jatra	January	5,000	25	Sweets, toys, stationery, etc.
		Church Feast	December	2,000	4	Tea, gram, etc.
	Tiracol	Church Feast	May	1,200	2	Tea, gram etc.
	Torxem	Jatra	November	1,000	6	Tea, sweets and stationery.
	Tamboxem	Jatra	November	800	5	Tea, sweets and stationery.

Varconda	Jatra	November	800	5	Tea, sweets and stationery.
Nagzar	Jatra	December	1,000	7	Tea, sweets and stationery.
Mopa	Jatra	December	700	5	Tea, sweets and stationery.
Poroscodem	Jatra	December	1,000	8	Tea, sweets and stationery.
Uguem	Jatra	December	1,200	8	Tea, sweets and stationery.
Macasana	Ramnavami	April	400	2	Tea, sweets and stationery.
Arabo-Dargalim	Jatra	December	300	3	Tea, sweets and stationery.
Tale-Dargalim	Jatra	January	300	3	Tea, sweets and stationery.
Deulwado-Dargalim	Jatra	December	1,000	7	Tea, sweets and stationery.
Arabo-Dargalim	Church Feast	November	100	2	Sweets, grams, etc.
Tuem	Jatra	November	500	4	Sweets, tea, grams, stationery, etc.
Morgim	Morzai jatra	November	3,000	25	Sweets, grams, stationery, etc.
	Shigmo	March	1,500	6	Sweets, grams, stationery, etc.
	Ramnavami	April	800	5	Sweets, grams, stationery, etc.
Vazari	Mahadev-Santeri jatra	December	800	5	Sweets, grams, stationery, etc.
Ibrampur	Jatra	December	700	5	Sweets, grams, stationery, etc.
Parcem	Bhagvati Devi jatra	October	1,000	15	Sweets, grams, stationery, etc.
	Mahapurush jatra	November	700	10	Sweets, grams, stationery, etc.
Vaidongor-Parcem	Church Feast	May	1,000	10	Sweets, grams, stationery, etc.
Agarvado	Santeri Devi jatra	December	600	10	Sweets, grams, stationery, etc.

APPENDIX 13—contd.

1	2	3	4	5	6	7
Pernem—*contd.*		Nagnath jatra	December	500	10	Sweets, grams, stationery, etc.
		Church Feast	May	700	10	Sweets, grams, stationery, etc.
	Chopdem	Vetal jatra	December	2,000	30	Sweets, grams, stationery, etc.
		Ravalnath jatra	December	800	15	Sweets, grams, stationery, etc.
		Bhumika jatra	November	700	12	Sweets, grams, stationery, etc.
	Corgao	Ramnavami	April	600	2	Sweets, flowers, etc.
		Kamleshwar saptaha	July	350	3	Sweets, flowers, etc.
		Kamleshwar jatra	November	1,000	16	Tea, sweets, toys, stationery, etc.
		Shaileshwar jatra	November	800	10	Tea, sweets, toys, stationery, etc.
		Kulkaleshwar jatra	November	500	6	Tea, sweets, toys, stationery, etc.
		Bhumika jatra	November	500	4	Tea, sweets, toys, stationery, etc.
		Shishirotsav	February	1,000	3	Tea, sweets, etc.
		Church Feast	December	3,000	12	Tea, sweets, toys, stationery, etc.
	Mandrem	Bhagvati saptaha	October	1,000	5	Tea, sweets, toys, stationery, etc.
		Feast of Out Lady of Rosary	November	600	3	Tea, sweets, toys, stationery, etc.

	Askon-Mandrem	Ravalnath jatra	November	600	3	Tea, sweets, toys, stationery, etc.
		Bhagvati jatra	November	600	3	Tea, sweets, toys, stationery, etc.
		Pateshwar jatra	November	600	2	Tea, sweets, toys, stationery, etc.
Quepem	Quepem	Feast of Blessed Sacrament.	May	3,000	100	Sweets, vegetables, fish, utensils, etc.
		Feast of Ou Lady of Piety.	October	1,500	25	Sweets, vegetables, fish,, utensils, etc.
	Gudo	Shri Dev Shantadurga Chamundeshwar Mahamaya Jatra.	December/January	1,500	20	Flowers, sweets, paintings, utensils, toys, etc.
	Cotombi	Dev Mahadev Jatra	November/December	700	8	Flowers, sweets, paintings, utensils, toys, etc.
	Cavorem	Mallikarjun Jatra	March	1,000	50	Flowers, sweets, utensils, toys, etc.
	Pirla	Paik Dev Jatra	March	800	40	Flowers, sweets, utensils, toys,, etc.
	Cazur	Siddhanath Jatra	November	300	30	Flowers, sweet, utensils, toys, etc.
	Fatorpa	Shantadurga Kunkalkarin Jatra.	December	50,000	500	Flowers, sweets, utensils, toys, general commodities, etc.
	Ambaulim	Shri Dev Godgal Jatra	February	300	25	Flowers, sweets, utensils, toys, etc.
	Cacora	Hanuman jatra	April	7,000	100	Flowers, sweets, utensils, toys, etc.
		Uruz	April	2,500	50	Flowers, sweets, utensils, toys, etc.

APPENDIX 13—concld.

1	2	3	4	5	6	7
Quepem—*contd.*	Molcarnem ..	Mallikarjun jatra ..	November ..	1,000	4	Flowers, sweets, utensils, toys, etc.
		Feast of Our Lady of Piety.	April ..	500	2	Flowers, sweets, utensils, toys, etc.
	Xeldem ..	Satyanarayan puja ..	7th January ..	300	3	Flowers, sweets, utensils, toys, etc.
		Tilamol feast ..	May ..	7,000	100	Flowers, sweets, utensils, toys, animals, etc.
	Curchorem ..	Guardian Angel Feast	November ..	5,000	25	Sweets, meat, animals, toys etc.
	Candivade ..	Shivaratra ..	February/March ..	3,000	15	Flowers, sweets, utensils, toys, etc.
	Shirfod ..	Shivaratra ..	February/March ..	1,000	2	Flowers, sweets, utensils, toys, etc.
	Chamamol ..	Ramnavami ..	April ..	1,000	2	Flowers, sweets, utensils, toys, etc.
Sanguem ..	Sanguem ..	Annual Church Feast ..	May ..	6,000	100	Utensils, footwear, clothes, handicrafts, wooden articles, fruits, dry chillies, onions, dry fish, cashewnuts, etc.
	Zambauli ..	Shigmo ..	March ..	10,000	15	Sweets, flowers, etc.
Canacona ..	Canacona Chauri	Church Feast ..	January ..	2,000	40	Stationery, sweets, vegetables, etc.
	Partgal ..	Ramnavami ..	April ..	5,000	75	Stationery, sweets, vegetables, etc.

	Shristhal	Rathasaptami	February	2,000	40	Stationery, sweets, vegetables, etc.
		Shigmo	March	2,000	40	Do.
	Mashem	Chaitri Paurnima	April	2,000	40	Do.
	Talpona	Shivaratra	February	2,000	40	Do.
	Loliem	Jatra	May	2,000	40	Do.
	Molye	Feast	April	2,000	30	Do.
	Agonda	Feast	April	2,000	30	Do.
	Sadolshem	Saldoshe feast	May	2,000	30	Do.
	Poinguinim	Chiplem feast	May	2,000	30	Do.
		Galgibag feast	January	2,000	30	Do.
		Biejatra	March	2,000	30	Do.
Satari	Valpoi	Feast of Our Lady of Lourdes	February	500	6	Sweets, toys, pan bidi.
	Velus	Kalo	January/February	5,000	25	Sweets, toys, pan bidi.
	Nagargao	Kalo	January/February	3,000	10	Do.
	Thana	Kalo	February/March	4,000	15	Do.
	Compordem	Dirgichi jatra	December	2,500	10	Do.
	Ona	Kalo	December	5,000	30	Do.
	Poriem	Kalo	January	6,000	40	Do.
	Pissurlem	Kalo	March	2,000	10	Do.
	Querim	Kalo	January	2,500	9	Do.
	Pal	Kalo	March	1,500	8	Tea and pan bidis
	Sanvordem	Kalo	January	800	6	Do.
	Codal	Jatra	December	300	5	Do.
	Nanus	Saptaha	March	200	2	Do.
	Carambolim-Brama	Brahmosthava	May	2,000	5	Do.

APPENDIX 14

BAZAARS IN THE GOA DISTRICT

Name of the Village or town	Day on which bazaar is held	No. of villages taking advantage	Approximate number of persons taking advantage	Approximate number of traders	Commodities sold	Volume of turnover
1	2	3	4	5	6	7
Assonora ..	Tuesday ..	3	500	25	Rice, wheat, fish, vegetables etc.	Maximum 1 tonne. Minimum 1/2 tonne.
Assolna ..	Friday ..	3	200	8	Earthenware, vegetables, fruits, mats etc.	N.A.
Bicholim ..	Wednesday ..	9	3,000	35	Bananas, coconut, cashewnut, dry fish, vegetables, rice, chillies,, onions, arecanut, fruit etc.	N.A.
Adcolna (Banastarim)	Friday ..	11	2,000	300	Clothes, chillies, steel, copper, brass, aluminium, earthen pots, biscuits, bananas, vegetables, dry fish, fish etc.	N.A.
Aldona ..	Saturday ..	4	500	35	Rice, wheat, fish, vegetables etc. ..	Maximum 1 tonne. Minimum 1/2 tonne.

Calangute	Saturday	6	2,000	200	Rice, wheat, fish, vegetables etc.	Maximum 2 tonnes. Minimum 1, tonne.
Quepem	Sunday	8	500	75	Dry fish, fresh fish, vegetables, utensils etc.	N.A.
Cuncolim	Sunday and Tuesday	7	15,000	150	Groceries, vegetables etc.	N.A.
Mhardol	Monday	6	500	75	Clothes, chillies, steel, copper, brass, aluminium, earthen pots, biscuits, bananas, vegetables, dry fish, fresh fish etc.	N.A.
Mapusa	Friday	All villages in Bardez taluka and also from other neighbouring talukas.	4,000	400	Rice, wheat, fish, vegetables etc.	Maximum 30 tonnes. Minimum 10 tonnes.
Perneni	Thursday	27	500	15	Vegetables, fish, groceries, stationery etc.	Maximum Rs. 2,500 Minimum Rs. 1,500.
Ponda	Wednesday and Saturday.	13	1,500	200	Clothes, chillies, steel, copper, brass, aluminium, earthen pots, biscuits, bananas, vegetables, dry fish, fish etc.	N.A.
Sanguem	Wednesday	20	500	25	Dry fish, fruits, onions, pottery, hosiery, clothes, eatables etc.	N.A.

APPENDIX 14—contd.

1	2	3	4	5	6	7
Sanquelim ..	Monday ..	19	6,000	100	Bananas, fruits, coconuts, cashewnuts, dry fish, vegetables arecanut, sugar, pulses, onions, cloth, etc.	N.A.
Siroda ..	Tuesday ..	3	200	50	Clothes, chillies, steel, copper, brass, aluminium and earthen pots, biscuits, plantains, vegetables, dry fish, fresh fish, etc.	N.A.
Siolim ..	Wednesday ..	10	1,500	150	Rice, wheat, fish, vegetables etc.	Maximum 3 tonnes. Minimum 1 tonne.
Tuem ..	Sunday ..	2	500	15	Rice, wheat, fish, vegetables, etc.	Maximum 1/2 tonne. Minimum 1/4 tonne.
Valpoi ..	Tuesday ..	40	5,000	25	Cloth, utensils, pan bidis, arecanut, coconut, vegetables, spices, cutlery etc.	N.A.

APPENDIX 15

A LIST OF DISTRICT ROADS

Serial No.	Name of the Road	Type	Length Kms.
1	Road leading to Cansarpale Temple ..	Blacktopped ..	1·10
2	Cansarpale-Salem Road	Macadam ..	6·20
3	Candeapar-Usgao Road	Blacktopped ..	3·20
4	Curchorem-Xelvona Road ..	Macadam ..	3·50
5	Dabolim-Pale Road	Blacktopped ..	6·00
6	Assolna-Ambelim Road	Macadam ..	1·40
7	Approach Road to Marmal Emvaddo..	Blacktopped ..	0·40
8	Betul-Carl-Molorem Road ..	Macadam/Blacktopped	6·10
9	Approach Road to Dattawadi Temple ..	Blacktopped ..	0·35
10	Opa-Candeapar Road	Blacktopped ..	2·00
11	Bali-Fatorpa Road	Blacktopped ..	12·272
12	Maicaim-Tonca Road *via* Acamvaddo	Blacktopped ..	0·897
13	Approach Road to Teachers' Training College at Porvorim.	Macadam ..	0·15
14	Approach Road to F Type Quarters at Altinho.	Blacktopped ..	0·192
15	Approach Road to Common Facility Centre.	Blacktopped ..	1·05
16	Approach Road to P. W. D. ..	Blacktopped ..	0·449
17	Approach Road to Cumbarjua ..	Macadam ..	1·10
18	Ordofondo-Sadalshem Road ..	Blacktopped ..	4·30
19	Aturli-Naroa Road	Macadam ..	0·875
20	Road to Polytechnic premises and approach road to Hostel Building.	Blacktopped ..	0·486
21	Pernem-Morgim Road	Macadam/Blacktopped	15·00
22	Agarvado-Arambol Road *via* Mandrem.	Macadam/Blacktopped	11·00
23	Pernem-Arambol Road *via* Corgao ..	Macadam/Blacktopped	15·00
24	Arambol-Querim Road	Blacktopped ..	8·00
25	Pernem-Deussua Road	Macadam ..	3·00
26	Saligao-Badem Road	Macadam ..	7·00
27	Duler Siolim Road *via* Marna ..	Blacktopped ..	6·00
28	Sivolim-Cunchelim Road	Blacktopped ..	5·787
29	Sinquerim-Siolim Road	Macadam/Blacktopped	17·50
30	Betim-Sirsaim Road	Blacktopped ..	13·30
31	Mapusa-Aldona Road	Blacktopped ..	6·466
32	Mapusa-Colvale *via* Corlim Road ..	Blacktopped ..	9·28
33	Calangute-Baga Road	Blacktopped ..	1·605
34	Road to Monte de Guirim from Mapusa-Betim Road.	Blacktopped ..	0·80
35	Pilerne-Aguada Road	Macadam/Blacktopped	10·608
36	Saligao-Calangute Road	Blacktopped ..	4·10
37	Maina-Chicalim-Colvale Road ..	Macadam/Blacktopped	6·55
38	Colvale-Nanora-Pirna Road ..	Macadam ..	2·60
39	Cunchelim-Camurlim Road ..	Blacktopped .	5·00

APPENDIX 15—contd.

Serial No.	Name of the Road	Type	Length Kms.
40	Parra-Nagoa-Calangute Road ..	Blacktopped ..	5·178
41	Nagoa-Arpora Road	Blacktopped ..	1·29
42	Camurlim-Siolim Road *via* Vagalim, Oxel	Macadam ..	6·297
43	Anjuna-Colvale Road	Macadam ..	4·63
44	Vagator Beach Road	Macadam ..	1·16
45	Remaining length of Colvale-Revora Pirna-Mencurem Road.	Macadam ..	8·90
46	Bicholim-Maem-Corjuem Road ..	Macadam/Blacktopped	6·80
47	Bicholim-Bordem-Salem Road ..	Macadam ..	14·00
48	Mulgao-Naroa Road	Macadam ..	12·00
49	Usgao-Gangem Road	Macadam ..	6·00
50	Sanquelim-Gavthan-Pale Road ..	Macadam/Blacktopped	16·00
51	Sanquelim-Cothi Road	Blacktopped ..	4·90
52	Bicholim-Naroa Road	Blacktopped ..	6·20
53	Navelim to Amona Road	Macadam ..	6·50
54	Valpoi-Gangem Road	Macadam ..	18·00
55	Onda-Morlem Road	Macadam/Blacktopped	12·00
56	Valpoi-Davem Road	Macadam ..	5·00
57	Davem to Valpoi-Codal Road ..	Macadam ..	N.A.
58	Old Goa to Goa Velha *via* Neura ..	Blacktopped ..	11·32
59	Morombio Grande to Caranzalem Road	Blacktopped ..	8·412
60	Panaji to Goa-Velha *via* Merces Road .	Blacktopped ..	9·45
61	Merces-Chimbel Road	Macadam ..	2·00
62	Ribandar-Bombido	Macadam ..	2·00
63	Old Goa-Gandaulim to Marcela ..	Blacktopped ..	5·00
64	Municipal Road in front of the Dhempo College, Panaji, starting from its junction with P. W. D. Road leading to Dona Paula upto Ponte de Linhares, *via* Gaspar Dias, Campal, Secretariat, Bus Stand comprising of :— (*a*) Alameda President Craveiro Lopes. (*b*) Avenida de Republica (*c*) Avenida de Brazil. (*d*) Avenida de D. Joao de Castro.	Blacktopped ..	4·15
65	Marcela-Querim	Macadam/Blacktopped	14·00
66	Ponda-Cuncolim Road	Macadam Blacktopped	12·00
67	Mhardol-Caranzol Road	Blacktopped ..	7·50
68	Ponda-Dabal Road	Macadam/Blacktopped	16·00
69	Siroda-Conxem-Nirancal Road ..	Macadam ..	17·50
70	Mhardol-Priol *via* Apoval Road ..	Blacktopped ..	4·60
71	Mundai-Marcaim Road *via* Darcone ..	Macadam ..	6·20
72	Bandora-Undir Road	Blacktopped ..	4·00
73	Chicalim-Baradi Road . ..	Macadam/Blacktopped	28·80

APPENDIX 15—concld.

Serial No.	Name of the Road	Type	Length Kms.
74	Carmona-Macasana Road	Blacktopped ..	19·943
75	Margao-Macasana	Blacktopped ..	12·810
76	Cuncolim-Veroda Road	Macadam ..	7·25
77	Margao-Chandor Road *via* Davorlim ..	Blacktopped ..	12·00
78	Branch Road Nesai-Guirdolim .	Blacktopped ..	5·00
79	Assolna-Betul Road	Blacktopped ..	6·00
80	Margao-Colva Road	Blacktopped ..	4·792
81	Ozro-Rasai Road	Blacktopped ..	6·50
82	Raicho-Ambo-Nuvem Road ..	Macadam ..	3·24
83	Cuncolim-Velim Road	Blacktopped ..	3·50
84	Mogul-Seraulim Road	Macadam ..	1·50
85	Cuncolim Dandora Assolna Road ..	Blacktopped ..	2·96
86	Road from Chandor Church to the Proposed Chandor-Cotta Bridge.	Macadam ..	1·313
87	Road starting from the main Road Margao-Cortalim to Majorda at Nuvem.	Blacktopped .	0·988
88	Bogmalo Beach Road . ..	Blacktopped .	1·80
89	Cansaulim Verna Road . ..	Blacktopped ..	1·95
90	Cortalim-Consua Road	Blacktopped ..	2·96
91	Cansaulim-Cortalim Road .	Macadam/Blacktopped	9·938
92	Headland Circular Road at Harbour ..	Blacktopped ..	6·24
93	Tilamol-Assolda Road ..	Blacktopped ..	6·50
94	Amona-Cotombi Road .. .	Macadam ..	5·96
95	Amolem-Akamola Road . .	Macadam ..	2·50
96	Sirvoi-Molcarnem Road	Macadam	8·00
97	Bansai-Cacora Road	Blacktopped ..	1·70
98	Gadianvaddo Road . ..	Macadam ..	1·50
99	Deulmola Road .. .	Macadam ..	4·00
100	Sanguem Colem Road	Blacktopped ..	8·00
101	Sanguem-Zambaulim Road ..	Blacktopped ..	1·90
102	Xelpem Road	Macadam ..	2·50
103	Tolsai Road	Macadam ..	2·40
104	Agonda Road	Macadam ..	4·00
105	Carmona Road	Macadam ..	2·00
106	Uguem Road	Macadam ..	5·00
107	Canacona-Porirm Road	Macadam ..	3·50
108	Ramala-Beira Mar Road	Macadam ..	2·10
109	Canacona-Gal Road	Macadam/Blacktopped	13·00
110	Ramal a Partagal Road	Blacktopped ..	1·08
111	Parve-Suleri-Carl-Molerom-Betul Road	Macadam/Blacktopped	15·80

APPENDIX 16—contd.

A LIST OF VILLAGE AND PANCHAYAT ROADS

Village Roads

Serial No.	Name of the Road	Type	Length Kms.
1	Marvasodda Sonarbag road at Usgao ..	Macadam	.. 3.50
2	Approach road to Arvalem Temple ..	Blacktopped	.. 0.50
3	Chincholem Talegao road (St. Inez Talegao)	Blacktopped	.. 5.00
4	Corlim Carambolim ..	Blacktopped	.. 2.20
5	Road from School building at Talegao to the foot of the hill Oitale.	Blacktopped	.. 0·63
6	Village road from the house of Shri A. Braganza to the top of the Divar Hillock	Macadam	.. 0.45
7	Durbate-Agapur Road ..	Macadam	.. 2.50
8	Borim to Siddhanath Hill including by pass round to Navadurga Temple road.	Macadam	.. 3.506
9	Road leading to Dhavali Temple from main P.W.D. road Ponda Durbate in Ponda taluka.	Blacktopped	.. 0.50
10	Bandora Gavnem (upto village temple) including link road to Caranzalem.	Blacktopped	.. 5.90
11	Opa-Codar road ..	Macadam	.. 1.52
12	Road leading from Margao-Borim road to Loutulim church.	Blacktopped	.. 1.385
13	Road leading from Loutulim church to Ambora	Blacktopped	.. 0.235
14	Road leading from P. W. D. road Margao Canacona to Malghini.	Macadam	.. 3.00
15	Village road Canacona-Loliem-Vasort	Macadam	.. 4.40
16	Porvorim to Paithan road ..	Macadam	.. 0.55
17	Velguem-Gadianvado-Cotombi road ..	Blacktopped	.. 3.575
18	Conus-Codguinim road ..	Macadam	.. 2.86
19	Road leading to the Pilar Society at St. Andre, Goa Velha	Blacktopped	.. 1.95
20	Cavelossim to Tambadi road ..	Macadam	.. 1.50
21	Nagoa village road ..	Macadam	.. 2.50

Panchayat Roads

1	Poroscodem to Nagzar via Varconda road	Macadam	.. 10.00
2	Vazri Gothawada to Caculnem ..	Macadam	.. 4.00
3	Road linking Tarmas to Ibrampur ..	Macadam	.. 11.00
4	Verlem main road ..	Blacktopped	.. 4.50
5	Pilerne Church road ..	Blacktopped	.. 5.00
6	Prabhuwado road linking to Parra and Calangute	Blacktopped	.. 0.75

APPENDIX 16—contd.

Serial No.	Name of the Road	Type	Length Kms.
7	Cobrawado road leading to beach ..	Blacktopped ..	0.45
8	Sauntawado road ..	Blacktopped ..	0.30
9	Vansowado to Monte de Guirim road ..	Macadam/Blacktopped	2.23
10	Mazilwado road ..	Blacktopped ..	1.40
11	Road No. 8 linking Mapusa-Betim-Parra	Blacktopped ..	1.863
12	Salem to Amthan road ..	Macadam ..	2.00
13	Assonora-Adwalpale-Pirna road ..	Macadam ..	5.00
14	Road leading to Tirtha ..	Macadam ..	1.30
15	Chirekhan to Carambolim road ..	Macadam ..	2.80
16	Maulinguem-Curchirem road ..	Macadam ..	5.50
17	Padeli-Vantem road ..	Macadam ..	6.50
18	Codal-Thana road ..	Macadam ..	7.50
19	Fetori to Naroa road ..	Macadam ..	2.00
20	Descansowado to Muddi road ..	Macadam ..	1.00
21	Tonca School to Toltowado road ..	Macadam ..	2.50
22	Madel Jetty to St. Bartbolomeo Church road	Macadam ..	9.00
23	Road leading to Adexel from Primary School building	Macadam ..	3.00
24	Banastarim to Aldona road ..	Macadam ..	3.00
25	Parampai road ..	Macadam ..	1.00
26	Nirancal-Conxem road ..	Macadam ..	3.00
27	Ganvthan to Muddi road ..	Macadam ..	2.00
28	Patto-Betqui road ..	Macadam ..	0.30
29	Satodem road ..	Macadam ..	1.50
30	Tiral-Querwado road ..	Macadam ..	3.00
31	Road from Capileshwari to Velopwado	Macadam ..	0.23
32	Panchayat road from Borim-Siddhanath to Sirsaim	Macadam ..	0.65
33	Cavelossim Church to Assolna Ferry road	Macadam ..	2.50
34	Curtorim Church to Nesai road ..	Blacktopped ..	4.00
35	Loutulim Church to Acsona road ..	Blacktopped ..	3.00
36	Pernem Centre to Chandor road ..	Macadam ..	4.54
37	Colva-Rachol Seminary-Tembi road ..	Macadam ..	6.90
38	Main Morumgao-Cuncolim to Durga Farm at Chinchinim road.	Blacktopped ..	1.80
39	Chicalim Internal road ..	Macadam ..	1.50
40	Road leading to Bandewada ..	Macadam ..	1.00
41	Road leading to Velopwada ..	Macadam ..	1.00
42	Road leading to Pontemol ..	Macadam ..	1.00
43	Road from Bacbata to Maina ..	Macadam ..	1.123
44	Vichundrem road ..	Macadam ..	2.00
45	Carmona road ..	Macadam ..	0.50

APPENDIX 16—concld.

Serial No.	Name of the Road	Type	Length Kms.
46	Rivona to Queware road ..	Macadam ..	5.00
47	Cumbarewado to Shelter road ..	Macadam ..	2.00
48	Parve to Agonda road ..	Macadam ..	1.00
49	Siroda road ..	Macadam ..	0.75
50	Davalnemol to Polem Road ..	Macadam ..	1.20
51	Shristhal to Gawlevaipedo road ..	Macadam ..	5.00
52	P.W.D. road to Calwade ..	Macadam ..	2.00
53	Mukerdmoc to Mokhand road ..	Macadam ..	1.00
54	Road from Primary School to Church at Fudem	Blacktopped ..	0.70
55	Sallu Costa's house to Toleaband in Loutulim village road.	Macadam ..	1.863
56	Nirbogan road ..	Macadam ..	0.431
57	Link road Naqueli-Ambora ..	Macadam ..	0.671
58	Betora to Shindole road ..	Macadam ..	2.50
59	Link road between Margao-Canacona road from Chinchinim-Assolna via Banda	Macadam ..	2.385
60	Battemado road via Dramapur Church from main P.W.D. road Margao/Canacona	Macadam ..	2.09
61	Gudi Soldade P.W.D. to Cumbarwado road.	Macadam ..	0.94
62	Durga Seed Farm to Chinchinim Assolna road.	Macadam ..	1,485

APPENDIX 17

GOODS TRANSPORT (CODEWISE)

Group Code	Details	Sub-groups
0	Food and live animals ..	(*i*) Live animals. (*ii*) Meat and meat preparations. (*iii*) Dairy products and eggs. (*iv*) Fish and fruit preparations. (*v*) Cereal and cereal preparations. (*vi*) Fruits and vegetables. (*vii*) Sugar and sugar preparations. (*viii*) Coffee, tea, cocoa, spices and manufacture thereof. (*ix*) Feeding staff for animals. (*x*) Miscellaneous food preparations
1	Beverages and tobacco ..	(*i*) Beverages. (*ii*) Tobacco and tobacco manufactures.
2	Crude materials, inedible oils (except fuels), Mineral ores, etc.	(*i*) Oilseeds, oilnuts and oil kernels. (*ii*) Wood lumber and cork. (*iii*) Textile fibres. (*iv*) Crude fertilizers and crude minerals. (*v*) Metalilferous ores and metal scrap. (*vi*) Crude animal / vegetable materials.
3	Mineral fuels, lubricants and related materials.	(*i*) Coal and coke. (*ii*) Petroleum and petroleum products.
4	Animal and vegetable oils and fats.	(*i*) Vegetable oil and fats. (*ii*) Animal and vegetable oil processed.
5	Chemicals ..	(*i*) Chemical elements and components. (*ii*) Mineral tar and crude chemicals. (*iii*) Dyeing, tanning and colouring materials. (*iv*) Medical and pharmaceutical products. (*v*) Essential oil and perfume materials. (*vi*) Fertilizers. (*vii*) Explosives. (*viii*) Plastic material. (*ix*) Chemical materials.
6	Manufactured goods classified chiefly by materials.	(*i*) Leather and leather manufacture n.e.c. (*ii*) Rubber manufactures n.e.c. (*iii*) Paper, paper board and manufacture thereof. (*iv*) Textile yarn, fabrics, made up articles and products. (*v*) Non-metallic manufactures n.e.c. (*vi*) Iron and steel. (*vii*) Non-ferrous metals.

APPENDIX 17—contd.

Group Code	Detail	Sub-group
7	Machinery and transport equipment.	(*i*) Machinery other than electric. (*ii*) Electric machinery/apparatus and, appliances. (*iii*) Transport equipment.
8	Miscellaneous manufactured articles.	(*i*) Sanitary fixtures (*ii*) Furniture. (*iii*) Clothing. (*iv*) Footwear. (*v*) Professional, scientific and controlling instruments, photographic and optical goods, watches, clocks, etc. (*vi*) Miscellaneous manufactured articles.
9	Others	....

APPENDIX 18

GOODS TRANSPORT (CHECK-POSTWISE)

Various types of Commodities Transported by Bullock carts check-post wise

Name of the check post		Name of the commodity
1. Dodomarg	..	(*i*) Food : Paddy/Rice, coconuts, vegetables, condiments and spices. (*ii*) Fuel : Firewood. (*iii*) Building materials : Timber, cement, stones, sand. (*iv*) Others : Grass.
2. Molem	..	(*i*) Food : Sweets. (*ii*) Building materials : Stones.
3. Polem	..	(*i*) Fuel : Cowdung. (*ii*) Building materials : Stones. (*iii*) Others : Hay.
4. Cortalim I	..	(*i*) Food : Rice, coconuts. (*ii*) Fuel : Firewood. (*iii*) Others : Sea-shells, fodder.
5. Cortalim II	..	(*i*) Fuel : Firewood. (*ii*) Building materials : Timber, sand. (*iii*) Others : Hay.
6. Bali	..	(*i*) Food : Paddy/Rice, coconuts. (*ii*) Fuel : Firewood, cowdung. (*iii*) Building materials : Stones, mud, cement, palm-leaves, timber. (*iv*) Others : Fertilizers.
7. Borim	..	(*i*) Food : Cereals, coconuts, salt, condiments, spices. (*ii*) Fuel : Wood. (*iii*) Building materials : Tiles, Palm leaves. (*iv*) Others : Fodder.
8. Dando	..	(*i*) Food : Paddy, coconuts, salt. (*ii*) Fuel : Coconut shells. (*iii*) Building materials : Tiles, timber. (*iv*) Others : Fodder.
9. Sanvordem	..	(*i*) Food : Rice, gur, coconuts. (*ii*) Fuel : Firewood. (*iii*) Others : Miscellaneous.
10. Verem	..	(*i*) Food : Salt, flour, fresh fruits, sweet potatoes, sugar, dry-fish. (*ii*) Fuel : Firewood. (*iii*) Building materials : Rubbles, stone ballast, laterite stones, sand, tiles, palm-leaves, mud, bamboos. (*iv*) Others : Grass, ashes, chairs, bidi leaves.

APPENDIX 18—contd.

Name of the check-post		Name of the commodity
11. Porvorim	..	(*i*) Fuel : Firewood. (*ii*) Building materials : timber, rubbles, water. (*iii*) Others : oilcake.
12. Cunchelim	..	(*i*) Food and beverages : Rice, flour, other cereals, sugar, coconut oil, condiments and spices, bananas, salt, sweet drinks, beer, etc. (*ii*) Fuel : Kerosene, firewood, coconut shells. (*iii*) Building materials : Cement, zinc sheets, iron bars, timber, bamboos, mud. (*iv*) Others : Furniture, mats, grass, gunny bags.
13. Old-Goa	..	(*i*) Food : Salt. (*ii*) Fuel : Firewood. (*iii*) Building materials : Bamboos, palm-leaves, sand and mud. (*iv*) Others : Husk, grass.
14. Tisca	..	(*i*) Food: Bananas.
15. Piligao	..	(*i*) Food : Rice, cereals, sugar, gur, coconuts, bananas, shellfish. (*ii*) Fuel : Kerosene. (*iii*) Others ; Soap.
16. Sanquelim	..	(*i*) Food : Cereals, gur, sweets, cashewnuts, coconuts, vegetables, oil. (*ii*) Building materials : Sand, Palm-leaves.
17. Valpoi	..	(*i*) Food : Paddy, gur, bananas. (*ii*) Building materials : Sand, stone ballast. (*iii*) Others : Empty boxes, grass.
18. Patradevi	..	(*i*) Food : Rice, condiments and spices, gur, salt, ground-nut oil, arecanuts. (*ii*) Fuel : Cowdung. (*iii*) Building materials : Cement. (*iv*) Others : Manure, furniture, grass, earthenware.

APPENDIX 19

TALUKAWISE LIST OF POST OFFICES

1. Pernem Taluka .. Sub-Office : Pernem.

   Combined Office : Pernem.

   Branch Offices : Arambol, Mandrem, Quiranpani, Corgao, Parcem, Agarvado, Morgim, Dargalim.

2. Bicholim Taluka Sub-Offices : Pale, Bicholim.

   Combined Office : Bicholim.

   Branch Offices : Bordem, Maem, Dodomarg, Mulgao, Sirigao, Usgao, Velguem.

3. Bardez Taluka .. Sub-Offices : Aldona, Assonora, Betim, Calangute, Candolim, Colvale, Mapusa, Porvorim, Saligao, Siolim, Tivim, Anjuna, Moira, Parra.

   Combined offices : Assonora, Betim, Calangute, Candolim, Colvale, Mapusa, Porvorim, Saligao, Siolim, Tivim, Aldona.

   Branch Offices : Calvim, Pomburpa, Corjuem, Britona, Norul, Reis Magos, Pilerne, Salai, Pirna, Assagao, Guirim, Ucassaim, Corlim, Sangolda, Sem. Saligao, Querim, Surla, Oxel, Camurlim.

4. Tiswadi Taluka .. Sub-Offices : Bambolim Camp, St. Inez, Taegao, Caranzalem, Chorao, Goa Velha, Neura, Piedade, Pilar, Calapur, St. Estevam, St. Lourence, Old Goa.

   Combined Offices : Caranzalem, Chorao, Goa Velha, Neura, Piedade, Pilar, Calapur, St. Estevam, St. Lourence, Old Goa.

   Branch Offices : Ribandar, Cumbarjua, Chimbel, Corlim Industrial Estate.

5. Satari Taluka .. Sub-Office : Valpoi.

   Combined Office : Valpoi.

   Branch Offices : Birondem, Onda.

6. Ponda Taluka .. Sub-Offices : Marcela, Ponda, Ponda Camp, Siroda, Mhardol. Combined Offices : Mhardol, Ponda, Siroda.

   Branch Offices : Bandora, Borim, Queula, Durbate, Verem-do-Ponda, Candeapar, Ponchavadi, Marcaim, Cundaim.

7. Salcete Taluka .. Sub-Offices : Aquem, Benaulim, Dramapur,Navelim-Camp, Majorda, Assolna, Carmona, Chandor, Chinchinim, Colva, Cuncolim, Curtorim, Loutulim, Navelim, Orlim, Raia, Sem-de-Rachol, Varca, Velim, Verna.

APPENDIX 19—contd.

Combined Offices : Assolna, Carmona, Chandor, Chinchinim, Colva, Curtorim, Loutulim, Betul, Navelim, Orlim, Raia, Sem-de-Rachol, Varca, Velim, Verna, Cuncolim.

Branch Offices : Betul, Nuvem, Cavelossim, Betalbatim, Seraulim.

8. Mormugao Taluka

Sub-Offices : Chicalim, Vasco-da-Gama, A. P. Bambolim, Cansaulim, Cortalim, Mormugao, Vasco-da-Gama.

Combined Offices : A. P. Bambolim, Cansaulim, Cortalim, Mormugao, Vasco-da-Gama.

Branch Office : Nil.

9. Sanguem Taluka

Sub-Offices : Sanguem, Curchorem.

Combined Offices : Sanguem, Curchorem.

Branch Offices : Bali, Curdi, Netorli, Darbandora, Molem, Colem, Sancordem, Revora, Quirlpal, Calem.

10. Quepem Taluka

Sub-Office : Quepem

Combined Office : Quepem.

Branch Offices : Bali, Xeldem, Cacora.

11. Canacona Taluka

Sub-Office : Canacona.

Combined Office : Canacona.

Branch Offices : Agonda, Gaodongrem, Loliem, Poinguinim, Cola, Palolem.

APPENDIX 20

A TABLE GIVING AVERAGE WHOLESALE PRICES OF SOME IMPORTANT COMMODITIES IN PANAJI MARKET (in Rs.)

Year	Rice (Per Quintal)			Wheat (Khandwa superior quality) Per Quintal	Turdal (Barsi superior quality) Per Quintal	Gram Vatana (superior quality white grains) Per Quintal	Moong (Barsi, medium quality) Per Quintal	Coconut Oil (pure, clean) Per Tin of 17 kgs.
	Raw fine	Raw Coarse	Boiled Coarse					
1	2	3	4	5	6	7	8	9
1965	N.A.	N.A.	N.A.	108·71	132·50	99.25	112·46	77·67
1968	188·04	172·88	166·22	131·97	188·85	108·24	136.74	93·72
1970	181·61	140·75	130·68	126·94	182·64	116.20	136·12	129·34
1971	187·82	145·10	144·24	123·96	192·01	114·94	154·67	111·08
1972	220·76	186·50	184·35	129·74	216·94	124·89	215·61	99·54
1973	300·00	217·50	228·13	176·87	262·42	198·47	266·53	156·35
1974	342·00	312·50	287·75	240·75	318·88	279·98	250·42	212·37
Monthwise :								
1974—								
January	N.A.	N.A.	264·37	N.A.	250·00	257·50	245·00	238·00
February	N.A.	N.A.	264·37	N.A.	252·50	262·50	242·50	217·50
March	340·00	N.A.	N.A.	250·00	250·00	297·50	245·00	205·67
April	325·00	290·00	270·00	260·00	264·00	300·00	240·00	207·50
May	330·00	290·00	270·00	255·00	272·50	282·50	242·50	212·50
June	335·00	280·00	275·00	240·00	272·50	270·00	242·50	213·50
July	N.A.	N.A.	285·00	225·00	290·00	274·00	242·50	211·50
August	N.A.	330·00	290·00	220·00	312·50	277·50	240·00	208·25
September	N.A.	330·00	295·00	225·00	397·50	292·50	252·50	204·50
October	N.A.	327·50	300·00	237·50	425·00	285·00	265·00	196·50
November	N.A.	330·00	320·00	250·00	420·00	280·75	265·00	218·00
December	380·00	322·50	331·50	245·00	420·00	280·00	282·50	215·00

APPENDIX 20—contd.

Year	Groundnut Oil (Pure clean) Per tin of 17 kg.	Vanaspati (Dalda Brand) Per tin of 4 kg.	Chillies dry (Byadgi, long superior quality) Per Quintal	Potato (medium quality Belgaum) Per Quintal	Onion (medium quality N. I.) Per Quintal	Coconut (medium size indigenous) Per 1,000	Sugar (medium N. I. Open market) Per Quintal	Gur (Belgaum medium quality) Per Quintal
1	10	11	12	13	14	15	16	17
1965	50·02	15·95	333·33	60·88	28·92	380·21	N.A.	69·67
1968	56·02	18·50	304·20	61·96	44·09	400·48	352·72	197·61
1970	85·72	25·61	740·28	86·34	48·80	598·47	181·88	85·00
1971	76·42	24·17	513·54	69·32	37·06	514·51	193·36	135·78
1972	77·82	24·57	370·49	81·57	59·96	435·21	320·25	171·67
1973 .. .	124·65	29·13	504·31	105·90	72·85	711·11	365·85	197·62
1974	146·38	N.A.	603·47	109·89	63·32	1,035·42	454·22	199·72
Monthwise : *1974*—								
January	130·00	N.A.	400·00	118·50	80·00	950·00	406·00	172·50
February	132·00	N.A.	430·00	92·50	75·00	975·00	391·00	165·00
March	138·00	N.A.	436·67	86·67	74·33	1050·00	410·67	166·67
April	142·50	N.A.	450·00	85·00	57·50	1,075·00	406·50	165·00
May	151·00	N.A.	475·00	105·00	55·00	1,125·00	400·00	162·50
June	153·50	N.A.	575·00	120·00	57·00	1,125·00	411·00	187·50
July	156·50	N.A.	650·00	133·50	60·00	1,050·00	446·50	193·00
August	160·00	N.A.	675·00	132·50	58·50	1,050·00	465·00	217·50
September	159·00	N.A.	850·00	115·00	57·50	1,000·00	592·50	250·00
October	148·00	N.A.	900·00	105·00	65·00	1,000·00	514·00	257·50
November	142·00	N.A.	687·50	112·50	57·50	1,000·00	497·50	260·00
December	144·00	N.A.	712·50	112·50	62·50	1,025·00	510·00	197·50

APPENDIX 21

A TABLE GIVING AVERAGE WHOLESALE PRICES OF SOME IMPORTANT COMMODITIES IN MARGAO MARKET (in Rs.)

Year	Rice (Per Quintal) Raw fine	Raw Coarse	Boiled Coarse.	Wheat (Khandwa superior quality) Per Quintal	Turdal (Barsi-superior quality) Per Quintal.	Gram vatana (superior quality white grains) Per Quintal.	Moong (Barsi medium quality) Per Quintal.	Coconut Oil (pure, clean) Per tin of 17 kgs.
1	2	3	4	5	6	7	8	9
1965	N.A.	N.A.	N.A.	107.22	134.38	93.89	111.75	77.00
1968	182.86	168.21	161.33	131.81	185.42	106.06	137.18	92.78
1970	179.72	137.52	127.81	126.50	180.85	116.05	135.62	127.82
1971	185.53	141.57	140.54	124.07	190.26	114.03	152.81	110.07
1972	216.82	182.29	181.25	128.68	214.65	124.43	213.92	98.08
1973	250.00	209.17	227.04	179.00	262.71	197.08	268.54	155.54
1974	337.50	308.59	283.21	237.27	318.75	276.67	250.38	212.10
Monthwise :								
1974								
January	N.A.	N.A.	263.00	N.A.	250.00	255.00	245.00	237.50
February	N.A.	N.A.	263.00	N.A.	247.50	262.50	245.50	216.50
March	335.00	N.A.	260.00	250.00	250.00	285.00	245.00	207.00
April	320.00	285.00	267.50	255.00	260.00	292.50	242.50	219.00
May	327.50	285.00	267.50	245.00	270.00	277.50	240.00	210.00
June	335.00	275.00	275.00	235.00	275.00	267.50	245.00	212.50
July	337.50	N.A.	282.50	224.00	287.50	270.00	240.00	209.00
August	335.00	325.00	285.00	222.50	317.50	278.75	246.25	210.00
September	335.00	325.00	290.00	220.00	400.00	292.50	255.00	202.50
October	N.A.	323.75	292.50	231.25	422.50	285.00	262.75	192.50
November	N.A.	325.00	322.50	245.00	420.00	277.50	257.50	215.00
December	375.00	325.00	330.00	245.00	425.00	276.25	280.00	213.75

APPENDIX 21—contd.

Year	Groundnut oil (pure clean) Per tin of 17 kgs.	Vanaspati (Dalda brand) Per tin of 4 kgs.	Chillies dry (Byadgi; long sup. quality) Per Quintal	Potato (medium quality Belgaum) Per Quintal	Onion (medium quality N.I.) Per Quintal	Coconut (medium size indigenous) Per 1,000	Sugar (medium N. I. open market) Per Quintal	Gur (Belgaum medium quality) Per Quintal
1	10	11	12	13	14	15	16	17
1965	50.03	15.78	335.84	63.29	28.56	376.46	N.A.	67.92
1968	55.21	18.74	291.22	59.52	43.21	375.12	350.17	195.17
1970	84.87	25.69	734.38	82.71	47.67	595.69	180.18	83.20
1971	75.47	24.16	493.92	68.60	36.80	469.72	192.41	135.76
1972	76.81	24.55	356.94	81.20	59.83	404.65	319.38	170.07
1973	123.92	29.12	488.26	103.67	73.53	667.71	364.94	193.89
1974	145.79	N.A.	593.65	108.65	62.83	951.25	453.71	196.67
Monthwise :								
1974								
January	131.00	N.A.	407.50	112.50	76.25	900.00	485.00	175.00
February	134.50	N.A.	425.00	95.00	77.50	950.00	397.50	160.00
March	136.50	N.A.	425.00	90.00	72.50	980.00	409.00	165.00
April	141.50	N.A.	437.50	87.50	60.00	1,032.50	406.50	162.50
May	150.00	N.A.	475.00	109.00	55.00	1,050.00	402.00	167.50
June	153.50	N.A.	575.00	117.50	52.50	1,100.00	410.00	182.50
July	153.50	N.A.	637.50	130.00	57.50	1,000.00	447.50	192.50
August	157.00	N.A.	663.75	130.00	59.50	990.00	469.50	215.00
September	157.50	N.A.	850.00	112.50	60.00	825.00	585.00	245.00
October	147.00	N.A.	852.50	102.50	60.50	850.00	512.50	245.00
November	141.00	N.A.	675.00	109.00	59.00	900.00	496.25	250.00
December	146.50	N.A.	700.00	108.25	63.75	837.50	503.75	200.00

APPENDIX 22

A TABLE GIVING AVERAGE WHOLESALE PRICES OF SOME IMPORTANT COMMODITIES IN MAPUSA MARKET (in Rs.)

Year	Rice (Per Quintal)			Wheat (Khandwa superior quality) Per Quintal	Turdal (Barsi superior quality) Per Quintal	Gram vatana (superior quality white grains) Per Quintal	Moong (Barsi, medium quality) Per Quintal	Coconut Oil (pure clean) Per tin of 17 Kgs.
	Raw fine	Raw Coarse	Boiled Coarse					
1	2	3	4	5	6	7	8	9
1965	N.A.	N.A.	N.A.	106·55	134·58	115·00	112·88	77·88
1968	187·95	173·70	164·76	136·25	183·47	107·20	135·84	92·48
1970	182·29	140·29	129·92	126·73	182·40	115·12	136·56	127·88
1971	188·44	143·00	143·12	124·79	189·93	113·69	153·40	109·51
1972	219·55	184·65	183·31	129·08	215·42	124·08	216·60	98·44
1973	N.A.	210·83	225·08	177·00	262·57	198·26	268·89	155·17
1974	343·00	308·04	293·02	238·39	320·94	279.58	249·62	211·88
Monthwise 1974								
January	N.A.	N.A.	N.A.	N.A.	250·00	257·50	245·00	236·50
February	N.A.	N.A.	N.A.	N.A.	250·00	262·50	240·00	213·50
March	340·00	N.A.	270·00	255·00	250·00	285·00	245·00	217·50
April	325·00	290·00	272·50	255·00	260·00	290·00	247·50	205·50
May	330·00	285·00	272·50	245·00	267·50	285·00	240·00	213·50
June	340·00	280·00	275·00	235·00	277·50	275·00	242·50	213·50
July	N.A.	N.A.	285·00	225·00	287·50	272·50	245·00	210·00
August	N.A.	N.A.	288·75	227·50	313·75	283·75	242·50	209·00
September	N.A.	325·00	300·00	225·00	417·50	292·50	250·00	203·50
October	N.A.	325·00	315·00	235·00	427·50	291·25	263·75	194·50
November	N.A.	323·75	322·50	241·25	425·00	278·75	262·50	215·00
December	380·00	327·50	329·00	240·00	425·00	281·25	271·75	210·50

APPENDIX 22—contd.

Year	Groundnut oil (Pure clean) Per tin of 17 kgs.	Vanaspati (Dalda brand) Per tin of 4 kgs.	Chillies dry (Byadgi, long, sup. quality) Per Quintal	Potato (medium quality, Belgaum) Per Quintal	Onion (medium quality N.I.) Per Quintal	Coconut (medium) size indigenous) Per 1000	Sugar (medium N.I. open Market) Per Quintal	Gur, (Belgaum, medium quality) Per Quintal
1	10	11	12	13	14	15	16	17
1965	50·42	16·05	337·83	65·72	29·50	402·08	N.A.	69·79
1968	55·47	18·84	293·54	62·13	44·40	449·17	351·80	198·23
1970	85·08	25·51	741·67	83·36	48·33	634·58	180·98	83·80
1971	75·50	24·17	502 78	70·39	36·65	587·01	192·22	136·65
1972	77·43	24·56	373·89	82·00	61·19	455·00	320·15	172·01
1973	124·85	29·12	499·31	108·65	74·50	731·88	364·68	195·90
1974	144·62	N.A.	613·54	112·08	63·27	1,082·29	455·67	197·56
Monthwise								
1974								
January	131·50	N.A.	412·50	112·50	77·50	1,000·00	405·00	170·00
February	130·00	N.A.	450·00	102·50	77·50	1,025·00	400·00	165·00
March	135·00	N.A.	437·50	87·50	67·50	1,050·00	410·00	167·50
April	140·50	N.A.	450·00	87·50	60·00	1,100·00	407·00	165·00
May	150·00	N.A.	500·00	112·50	57·50	1,175·00	402·00	170·00
June	150·00	N.A.	587·50	122·50	50·00	1,150·00	412·50	180·00
July	154·00	N.A.	650·00	132·50	58·00	1,150·00	449·00	195·00
August	153·50	N.A.	675·00	132·50	61·50	1,150·00	462·50	215·00
September	169·00	N.A.	875·00	117·50	61·00	1,062·50	595·00	245·00
October	147·75	N.A.	900·00	110·00	65·00	1,025·00	512·50	248·75
November	140·50	N.A.	725·00	112·50	63·75	1,050·00	505·00	250·00
December	143·75	N.A.	700·00	115·00	60·00	1,050·00	507·50	199·50

APPENDIX 23

A LIST SHOWING THE ACTS AND RULES IN FORCE IN THE UNION TERRITORY IN CONNECTION WITH THE PRISONS MATTERS.

Acts :

The Prisons Act in force from 6th February 1964.

The Prisoners Act in force from 6th February 1964.

The Identification of Prisoners Act in force from 1st February 1964.

The Prisoners (Attendance in Court) Act in force from 6th February, 1964.

The transfer of Prisoners Act (29 of 1950 in force from 19th March 1965).

Rules ;

1. The Goa, Daman and Diu Prisons (Remission) Rules, 1965.
2. The Goa, Daman and Diu Identification of Prisoners Rules, 1966.
3. The Goa, Daman and Diu Visitors of Prisoners Rules, 1968.
4. The Prisons (Goa, Daman and Diu Furlough and Parole) Rules, 1968.
5. The Goa, Daman and Diu Prisons (Petition and Appeal) Rules, 1968.
6. The Goa, Daman and Diu Prisons (Punishment) Rules, 1968.
7. The Goa, Daman and Diu Prisons (Admission, Classification and Separation of Prisoners) Rules, 1968.
8. The Goa, Daman and Diu Prisons (Convict Officers) Rules, 1968.
9. The Goa, Daman and Diu Prisons (Employment of Prisoners) Rules, 1968.
10. The Goa, Daman and Diu Prisons (Discipline) Rules, 1968.
11. The Goa, Daman and Diu Prisons (Facilities to Prisoners) Rules, 1968.
12. The Goa, Daman and Diu Prisons, Classification of Prisons (Amendment) Rules, 1969.
13. The Goa, Daman and Diu Prisons (Lunatic) Rules, 1969.
14. The Goa, Daman and Diu Classification of Prisons Rules, 1969.
15. The Goa, Daman and Diu Prisons (Prisons Buildings and Sanitary arrangements), Rules, 1969.
16. The Goa, Daman and Diu Prisons (Prisoner's Property and Documents) Rules, 1969.
17. The Goa, Daman and Diu Prisons (Routine) Rules, 1969.
18. The Goa, Daman and Diu Prisons (Habituals and Hardened Criminals) Rules, 1969.
19. The Goa, Daman and Diu Prisons (Staff Functions) Rules, 1969.
20. The Removal of Prisoners Order, 1969.
21. The Goa, Daman and Diu Civil Prisoners Rules, 1969.

APPENDIX 24

STATEMENT GIVING THE PRIMARY HEALTH CENTRES WITH THE VARIOUS SUB-CENTRES IN THE DISTRICT OF GOA

I. *Primary Health Centre—Pernem*

(1) Querim Sub-Centre	.. Querim, Corgao, Tiracol, Paliem, Arambol.
(2) Morjim Sub-Centre	.. Mandrem, Agarvado, Morjim.
(3) Torxem Sub-Centre	.. Caznem, Amberem, Uguem, Mopa, Tamboxem.
(4) Chandel Sub-Centre	.. Chandel, Cansarvornem, Vazri, Alorna, Ibrampur.

The remaining area is under the Primary Health Centre.

II. *Primary Health Centre—Bicholim*

(1) Maem Sub-Centre	.. Maem, Naroa, Vainguinim, Piligao.
(2) Amona Sub-Centre	.. Navelim, Cudnem, Amona, Sanquelim, Arvalem, Carapur.
(3) Pale Sub-Centre	.. Pale, Velguem, Surla, Cotombi.
(4) Mulgao Sub-Centre	.. Mulgao, Sirigao, Bordem, Adwalpale, Bicholim, Sarvona.
(5) Salem Sub-Centre	.. Mencurem, Dumacem, Salem, Latambarcem, Ona, Maulinguem, Curchirem.

The remaining area is under the Primary Health Centre.

III. *Primary Heatlh Centre—Valpoi*

(1) Nagargao Sub-Centre	.. Northern Part of Valpoi, Codal, Ponsuli-Choraundem, Caranzol.
(2) Pissurlem Sub-Centre	.. Ona, Pissurlem, Birondem, Guleli, Southern Part of Valpoi, Cotorem.
(3) Poriem Sub-Centre	.. Poriem, Querim, Morlem.

The remaining area is under the Primary Health Centre.

IV. *Primary Health Centre—Ponda*

(1) Cundaim Sub-Centre	.. Cundaim, Cuncoliem, Marcaim.
(2) Durbate Sub-Centre	.. Bandora, Durbate, Vadi, Telaulim, Queula.
(3) Borim Sub-Centre	.. Borim, Ponda.
(4) Candapar Sub-Centre	.. Curti, Candapar, Usgao, Codar, Conxem, Betora.
(5) Siroda Sub-Centre	.. Siroda, Nirancal.
(6) Priol Sub-Centre	.. Priol, Querim, Volvoi, Vagurbem.

The remaining area is under the Primary Health Centre.

V. *Primary Health Centre—Sanguem*

(1) Sancordem Sub-Centre	.. Darbandora, Sancordem.
(2) Calem Sub-Centre	.. Calem, Colem.
(3) Bati Sub-Centre	.. Bati, Netorli.

The remaining area is under the Primary Health Centre.

VI. *Primary Health Centre—Quepem*

(1) Cotombi Sub-Centre	.. Assolda, Hodar, Cotombi, Avedem, Xeldem, Amona, Deao, Quepem, Xelvona, Chaifi, Xic-Xelvona.

APPENDIX 24—contd.

(2) Molcarnem Sub-Centre .. Molcarnem, Rivona of Sanguem taluka, Sirvoi.
(3) Pirla Sub-Centre .. Provincia of Bali, Cavorem, Pirla, Ambaulim.

The remaining area is under the Primary Health Centre.

VII. *Primary Health Centre—Canacona*

(1) Gaodongrem Sub-Centre .. Gaodongrem Panchayat Area, Shristhal, Chauri Nagorcem.
(2) Cola Sub-Centre .. Cola Panchayat Area, Agonda, Palolem.

The remaining area is under the Primary Health Centre.

VIII. *Primary Health Centre—Candolim*

(1) Reis Magos Sub-Centre .. Nerul, Britona, Pilerne, Marra, Reis Magos.
(2) Saligao Sub-Centre .. Saligao, Sangolda, Guirim.
(3) Assagao Sub-Centre .. Anjuna, Assagao, Canca, Verla, Parra.
(4) Oxel Sub-Centre .. Siolim, Marna, Oxel.

The remaining area is under the Primary Health Centre.

IX. *Primary Health Centre—Cansaulim*

(1) Seraulim Sub-Centre .. Vanelim, Seraulim, Cana, Benaulim.
(2) Chicalim Sub-Centre .. Chicalim, S. Jacinto, Coitalim, Quelossim, Sancoale, Bogmalo.
(3) Betalbatim Sub-Centre .. Calata, Majorda, Utorda, Betalbatim, Sernabatim, Colva.

The remaining area is under the Primary Health Centre.

X. *Primary Health Centre—Bali*

(1) Fatorpa Sub-Centre .. Fatorpa, Quedem, Barcem, Naquerim, Quitol, Bali, Adnem.
2) Velim Sub-Centre .. Velim, Assolna, Ambelim, Chinchinim, Deussua
3) Cavelossim Sub-Centre .. Cavelossim, Carmona, Varca, Orlim.

XI. *Primary Health Centre*—Curtorim

(1) S. Jose de Areal .. Aquem, S. Jose de Areal, Davorlim, Dicarpale, Dramapur, Sirlim, Curtorim.
(2) Loutulim Sub-Centre .. Loutulim, Camurlim, Nuvem, Raia, Rachol.
(3) Navelim Sub-Centre .. Navelim, Talaulim.

XII. *Primary Health Centre—Aldona*

(1) Ecoshim Sub-Centre .. Pomburpa, Socorro, Salai, Bastora, Paliem, Ponolem.
(2) Pirna Sub-Centre .. Pirna, Nadora, Revora, Colvale, Camurlim.
(3) Tivim Sub-Centre .. Tivim, Assonora, Sirsaim.

The remaining area is under Primary Health Centre.

XIII. *Primary Health Centre—Betqui*

(1) Chimbel Sub-Centre .. Chimbel, Curca.
(2) Batim Sub-Centre .. Batim, St. Andre, S. Lourenco.
(3) Taegao Sub-Centre .. Talaulim, Bambolim, Taegao.
(4) Goltim Sub-Centre .. Chorao, S. Bartolomeu, Chorao Graca, Navelim, Goltim, S. Matias.

The remaining area is under the Primary Health Centre.

APPENDIX 25

LIST OF THE NEWSPAPERS AND PERIODICALS PUBLISHED FROM 1821 TO 1935 IN THE DISTRICT

Government newspapers and periodicals

1. *Gazeta de Goa*, a weekly official paper published in 1821.
2. *Chronica Constitucional de Goa*, a weekly official newspaper published in 1835.
3. *Echo da Lusitania*, published in 1836.
4. *Boletim do Governo do Estado da India*. published in 1837.
5. *O Vigilante*, published in 1838.
6. *O Observador*, published in 1839.
7. *O Correio da Nova-Goa*, published in 1844.
8. *A Voz dos Povos da India*, published in 1845.
9. *O Defensor da Ordem e Verdade*, published in 1852.

Private newspapers and periodicals

1. *O Ultramar*, published in 1859.
2. *A Phenix de Goa*, published in 1861.
3. *A Harmonia*, published in 1862.
4. *A Aurora de Goa*, published in 1863.
5. *A India Portugueza*, published in 1864.
6. *A Sentinela da Liberdade*, published in 1864.
7. *Jornal de Noticias*, published in 1868.
8. *A Imprensa*, published in 1870.
9. *A Gazeta de Goa*, published in 1872.
10. *O Mensageiro*, published in 1872.
11. *O Paiz*, published in 1873.
12. *O Progresso*, published in 1873.
13. *A Opiniao Publica*, published in 1873.
14. *O Oriente*, published in 1874.
15. *A Gazeta de Bardez*, published in 1874.
16. *Nova Goa*, published in 1876.
17. *A Patria*, published in 1877.

Marathi newspapers :

1. *Deshasudharanetshu*, published in 1872.
2. *Gnyanadarsha*, published in 1884.
3. *Kalikadarshan*, published in 1898.
4. *Hitachintaka*, published in 1900.
5. *Sudarshan*, published in 1900.
6. *Sat-Sanga*, published in 1902.
7. *Pathya Bodha*, published in 1904
8. *Chittakarshan*, published in 1906.
9. *Prachi Prabha*, published in 1909.
10. *Halad Cuncu*, published in 1910.
11. *Prabhat*, published in 1913.
12. *Hindu-mat*, published in 1914.
13. *Vidyaprasar*, published in 1915.
14. *Svayamsevak*, published in 1915.
15. *Gayak Mitra*, published in 1918.

APPENDIX 25—contd.

16. *Navajivan*, published in 1920.
17. *Pragati*, published in 1920.
18. *Bharatoday*, published in 1921.
19. *Shrikhand*, published in 1921.
20. *Bharat Mitra*, published in 1921.
21. *Gadgadat*, published in 1921.
22. *Napitoday*, published in 1921.
23. *Aryavidjnyan*, published in 1929.
24. *Manmohan*, published in 1929.
25. *Subhodha*, published in 1930.
26. *Yugantar*, published in 1933.
27. *Kala*, published in 1935.

Konkani newspapers :

1. *Udentichem Salik*, published in 1889.
2. *Novem Goem.*
3. *Porjecho Avaz.*
4. *Sad.*

APPENDIX 26

LIST OF OTHER SOCIAL AND EDUCATIONAL INSTITUTIONS IN THE DISTRICT.

1. Adarsh Vidya Prasarak Mandal, Siroda (Ponda).
2. Anjuna Villagers Association, Anjuna (Bardez).
3. Associacao Academica of Moira (Bardez).
4. Asylum 'Conselheiro Fernando D'Cunha Pinto', Candolim (Bardez).
5. Bhagini Mandal, Mapusa, (Bardez).
6. Charity Association of 'Pao de Santo Antonio' of Siolim (Bardez).
7. Institute of Educacao Progressiva, Ponsule (Canacona).
8. Lions Club of Margao (Salcete).
9. Lokshikshan Sanghatana, Dhargalim (Pernem).
10. Margao Junior Chamber (Salcete).
11. Mahila Mandal (Bicholim).
12. Our Lady of Fatima School, Ponchavadi (Ponda).
13. Our Lady of Perpetual Help, Sanquelim (Bicholim).
14. Primary School, Deussua (Salcete).
15. Rotary Club of Margao (Salcete).
16. Sancordem Education Society, Sancordem (Sanguem).
17. Sarvodaya Educational Society, Curchorem (Quepem).
18. Seva Samiti, Margao (Salcete).
19. Shaada English High School, Marcela (Ponda).
20. Shikshan Prasarak Sangh, Durbate (Ponda).
21. Shradhanand Dyanprasarak Mandal, Poinguinim (Canacona).
22. Shri Kamaleshwar Shikshan Prasarak Samsthan, Corgao (Pernem).
23. Shri Navadurga Vidyalaya, Marcaim (Ponda).
24. Shri Shantadurga Samsthan Committee, Queula (Ponda).
25. St. Anne's Convent, Cansaulim (Mormugao).
26. St. Anthony's Convent, Agasaim (Tiswadi).
27. St. Joseph's Boys Home, Calangute (Bardez).
28. St. Joseph's Convent High School, Nagoa, Verna (Salcete).
29. Tawakkal Educational Society, Baina (Vasco-da-Gama).
30. Vanita Mandal (Canacona).

DIRECTORY OF VILLAGES AND TOWNS

EXPLANATIONS OF COLUMN HEADINGS, SYMBOLS AND ABBREVIATIONS USED

The names of Towns and Villages are arranged in alphabetical order for the whole of the District.

Column 1.—The names are given both in English and Devnagari. Abbreviations indicating talukas :—

Bardez	BRD.	Sanguem	SNG.
Bicholim	BCL.	Salcete	SLCT.
Canacona	CNC.	Satari	STR.
Quepem	QP.	Tiswadi	TWD.
Mormugao	MRG.	Daman	DMN.
Pernem	PRN.	Diu	DIU.
Ponda	PND.		

Column 2.—(*a*) Direction and (*b*) Travelling distance of the village from the taluka headquarters. Abbreviations used showing direction from taluka headquarters :—

E	East	SE	South-East
W	West	NW	North-West
N	North	SW	South-West
S	South	HQ.	Headquarters
NE	North-East		

Column 3.—(*a*) Area of the village in hectares and of the towns in sq. kms.; (*b*) Total population ; (*c*) Number of houses ; (*d*) Number of households ; (*e*) Total number of agricultural population.

Column 4.—(*a*) Post Office ; (*b*) Its distance from the village.

Column 5.—(*a*) Port or wharf or jetty ; (*b*) Its distance from the village.

Column 6.—(*a*) Railway station ; (*b*) Its distance from the village.

Column 7.—(*a*) Nearest motor stand ; (*b*) Its distance from the village.

Column 8.—(*a*) Weekly bazaar ; (*b*) Distance from the bazaar place from the village ; (*c*) Bazaar day.

Column 9.—Drinking water facilities available in the village :—

W—wells ; p—pond ; pl—pipeline ; spr—spring : t—tank ; r—river.

Column 10.—(*a*) Number of mines ; (*b*) Type of mines.

Column 11.—Miscellaneous information about school, temple, mosque, church, chapel, dargah, chavadi, dispensary, co-operative society, dharmashalas, typing institutions, health centre, hospital, dispensary, veterinary dispensary, etc. :—

(sl) school
(h) high school
(pr) primary school
(m) middle school
(mc) medical college
(trclg.) training college
(Bld) Balwadi
(Fr) Fair
(Fs) Feast
(dml) dharmashala
(Typ) Typing institution
(Cs) Co-operative society
(MCW) Maternity and Child Welfare Centre
(tl) temple
(Cpl) Chapel
(Cch) Church
(FPC) Family Planning Centre
(c) credit
(cons) consumers
(ms) milk society
(fgs) food grain society
(mp) multipurpose
(frp) fair price shop
(HC) Health Centre
(PHC) Primary Health Centre
(Dp) Dispensary
(Vet Dp) Veterinary Dispensary
(H) Hospital
(dg) dargah
(cvd) chavadi
(VKSS) Vividha Karyakari Seva Society
(mq) mosque.

Months according to Hindu calendar :—

Ct-Chaitra ; Vsk-Vaishakha ; Jt-Jaishtha ; Asd-Ashadha ; Sra-Shravana ; Bdp-Bhadrapada ; An-Ashvina ; Kt-Kartika ; Mrg-Margashirsha ; Ps-Pausha ; Mg-Magha ; Phg-Phalguna ; Sud-Shuddha (first fortnight of the month) ; Vad-Vadya (second fortnight of the month).

Months according to Christian calendar :—

Jan—January ; Feb—February ; Mar—March ; Apr—April ; May—May ; Jn—June ; Jl- July ; Aug—August ; Sept—September ; Oct—October ; Nov—November ; Dec—December.

N.B.—Figures for distance in columns (2), (4), (5), (6), (7) and (8) are given in kms.

DIRECTORY OF VILLAGES AND TOWNS

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari	Direction; Travelling distance	Area (hectares); Pop; Houses; Households; Agriculturists	Post office; Distance	Port/Wharf/ Jetty; Distance
1	2	3	4	5
Adcolna; PND. हडकोळण ..	N 15.0	313.6; 1084; 177; 191; 179	Cundaim; 3.0	Banastarim; 1.5
Adnem; QP. अडणें ..	NE 6.0	N.A.; 789; 149; 149; 149	Quepem; 6.0	Betul; ..
Adsulim; SLCT. अडसुली ..	W 3.5	N.A.; 59; 12; 14; 8	Benaulim; 1.0	....
Advoi; STR. अडवय ..	S 7.0	492; 522; 96; 101; 83	Valpoi; 7.0	Panaji; 59.0
Advolpale; BCL. अडवलपाल ..	W 10.0	636.5; 994; 198; 202; 67	Assonora; 4.0	Panaji; 20.0
Agarvado; PRN. आगरवाडो ..	S 12.0	221.1; 854; 137; 189; 86	Pernem; 12.0	Caznem; ..
Aglote; SNG. आगलोट ..	N 31.0	N.A.; 1616; 270; 285; 136	Sancorda; ..	Panaji; 53.0
Agonda; CNC. आगोंद ..	N 9.0	N.A.; 2473; 480; 485; 134	Local; ..	Local; ..
Aldona; BRD. हळदोणें ..	E 7.5	803.9; 7255; 1550; 1553; 523,	Local; ..	Local; ..
Alorna; PRN. हळर्ण ..	E 26.0	2153.4; 2284; 364; 434; 577,	Pernem; 26.0	Panaji; 35.0
Ambari; TWD. आंबारी ..	N 16.0	N.A.; 119; 29; 29; 12	Panaji; 16.0	Panaji; 16.0
Ambaulim; QP. आंबावली ..	W 3.0	N.A.; 1722; 337; 338; 502	Quepem; 3.0	....
Ambedem; STR. आंबेडें ..	E 8.0	N.A.; 110; 22; 23; 4	Valpoi; 4.0	Panaji; 50.0
Ambeli; STR. आंबेली ..	S 9.0	N.A.; 59; 12; 13; N.A.	Birondem; 4.0	Panaji, 50.0
Ambelim; SLCT. आंबेली ..	S 14.0	N.A.; 2344; 610; 562; 200	Assolna-Velim; 1.0	Betul; 4.0
Amberem-PRN. Poroscodem; आंबेरें-परसकडें	W 5.0	359.4; 647; 75; 111; 201	Pernem; 5.0	Panaji; 30.0

DISTRICT

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 33.0	Ponda; 15.0	Banastarim; 1.0; Fri.	W.	..	Sl(pr); 3tl; Fr-Kt; Cs.
Margao; 15.0	Quepem; 6.0	Quepem; 6.0; Sun.	W.	..	2Sl(pr).
Margao; 3.5	Margao; 3.5	....	W.	..	....
Margao; 57.0	Valpoi; 7.0	Valpoi; 7.0; Tue.	W.	..	2Sl(pr, m); ms; Fgs; Rawalnath Fr-Ps; tl.
Margao; 54.0	Assonora; 4.0	Assonora; 4.0; Tue.	W.	1; Iron ore.	2Sl(pr, m); Santeri Fr; Sharvani Vitthal Fr; 3tls; Sharvani Vitthal tl; HC.
Margao; ..	Pernem; 12.0	Pernem; 12.0; Thu.	W.	..	2Sl(pr, m); 2tl; Devi Santeri tl.
Colem; 15.0	Ponda; 23.0	Ponda; 23.0; Wed. and Sat.	W, r.	3; Iron ore.	4Sl(pr); Santeri Fr; Fgs; 3tl.
Margao; 47.0	Local; ..	....	W.	..	6Sl(4pr, m, h); Cs; ms; 4tl; beach.
Margao; 75.0	Local; ..	Local; .... Sat.	W.	..	10Sl(3pr, 5m, 2h); Cs; May Fr; Cch; Cvd; PHC; St. Thomas Church.
Margao; 70.0	Salem; 2.5	Mapusa; 25.0; Fri.	W, r, spr.	..	8Sl(5pr, 3m); Cs; Betal Jatra-Kt; 10tl; Cch; Fort.
....	Panaji 16.0	....	W.	..	tl.
....	Quepem; 3.0	Quepem; 3.0; Sun.	W.	..	2Sl(pr); Cs; Cch Fs-Feb; tl; Cch; Ambaulim tank.
Colem; 35.0	Valpoi; 4.0	Valpoi; 4.0; Tue.	W.	..	3Sl(pr, 2m); Fr-31st Jan; tl.
Colem; 8.0	Valpoi; 9.0	Valpoi; 9.0; Tue.	R.	..	....
Margao; 14.0	Assolna; 2.0	Assolna; 2.0; Fri.	W.	..	Cs; 2Cpl.
Margao; 90.0	Pernem; 5.0	Pernem; 5.0; Thu.	W, t.	..	4Sl(pr); Mauli Fr-Ps; Shivratra-Mg; 2tl; Cch.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Amona; BCL. आमोणें ..	S 16.0	608.1; 2370; 340; 423; 327	Marcela; 5.0	Local; ..
Amona; QP. आमोणें ..	N 5.0	N.A., 750; 141; 141; 56	Quepem; 5.0	Betul; N.A.
Anjuna; BRD. हणजूण ..	W 10.0	1113.5; 5894; 1006; 1257; 394.	Local; ..	Chapora; 2.0.
Ansólem; STR. अन्सोलें ..	S 2.0	N.A.; N.A.; N.A.; N.A.; N.A.	Valpoi; 2.0	Panaji; 49.0
Antoriem; SNG. हांतरये ..	N 10.0	N.A.; 521; 84; 84; 35	Curchorem; 4.0	Churchorem; 4.0
Anzunem; STR. हणजूणें ..	N 28.0	N.A ; 192; 32; 36; 26	Gontelim; 4.0	Panaji; 54.0
Aquem; SLCT. आकें ..	E 2.0	N.A.; 1443; 1364; 96; 178.	Aquem-alto; 2.5	....
Arambol· PRN. हरमल ..	E 13.0	919.4; 3561; 558; 689; 429	Local; ..	....
Arossim; MRG. आरोमी ..	S 14.0	N.A.; 1460; 286; 295; 25	Cansaulim; 5.0	Mormugao; 14.0
Arpora-Nagoa; BRD. हडफडें-नागवें	W 5 0	574.3; 2985; 664; 683; 305	Calangute; 2.0	Panaji; 15.0
Arvalém; BCL. हरवळें ..	E 9.0	705.0; 1023; 198; 200; 69	Sanquelim; 2 0	Amona; 9 0
Assagao; BRD, आसगांव ..	W 5.4	1052.9; 2689; 552; 580; 149.	Local; ..	Chapora Anjuna; 3.5
Assodem; STR. असोडें ..	S 12.0	N.A.; 77; 12; 13; N.A.;	Birondem; 10.0	Panaji; 56.0
Assolda; QP. असोळडें ..	S 9.0	N.A.; 1028; 194; 196; 131	Quepem; 9.0	Betul; N.A.
Assolna; SLCT. असोळणे ..	S 12.0	N.A.; 3354; 828; 836; 313	Local; ..	Betul; 6.0
Assonora; BRD. अस्नोडे ..	NE 4.0	386.5; 2167; 401; 421; 130	Local; ..	Panaji; 25.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; N.A.	Sanquelim; 10.0	Sanquelim; 10.0; Mon.	W.	..	4SI(3pr, m); Cs; Dassara-Mrg; Mahalaximi Fr; 5tl; HC; Dp; Betal tl; Mahalaximi tl; Mahadev tl.
Margao; N.A.	Quepem; 5.0	Quepem; 5.0; Sun.	W.	..	2SI(pr); tl.
Vasco-da-Gama; 50.0	Mapusa; 10.0	Siolim; 2.0; Wed.	W.	..	8SI(5pr, m, 2h); 2Cs; cons Cs; fgs, tl; 2Cch; PHC; Vagator beach; Chapora Fort.
Colem; 44.0	Valpoi; 2.0	Valpoi; 2.0; Tue.	W. ..	..	....
Sanvordem-Curchorem; 4.0	Curchorem; 4.0	Curchorem; 4.0; Sat.	W.	..	....
Margao; 59.0	Sanquelim; 12.0	Sanquelim; 12.0; Mon.	W. ..	..	SI(pr); tl.
Margao; 3.0	Margao; 3.0	.... ..	W, pl ..	..	5SI (3pr. m, h); Cs.; 2tl; Cch.; H.
....	Chopdem; 10.0	Siolim; 11.0, Wed.	W, t. ..	..	7SI (5pr, m, h); 2Cs; fgs; cons Cs; Bhumikadevi Fr-Mrg.; Ravalnath Fr-Ps; 5tl; Cch; Dp.
Cansaulim; 5.0	Cansaulim; 5.0	.... ..	W. ..	..	SI(pr); Arossim Fr-Aug; Cpl.
Vasco-da-Gama; 45.0	Calangute; 2.0	Calangute; 2.0; Sat.	W. ..	..	4SI(3pr, h); Cs.; 2tl; Cch; Cpl.
Margao; 45.0	Local; ..	Sanquelim; 2.0; Mon.	W. ..	1; Iron ore	2SI(pr); 2Cs; Mahashivratri Fr-Mg; 2tl; Rudreshwar tl; Arvalem falls; Arvalem caves.
Vasco-da-Gama; 45.0	Mapusa; 5.4	Mapusa; 5.4; Fri.	W. ..	..	7SI(5pr, 2m,); 2Cs; Cch; tl.
Colem; 7.0	Colem; 7.0	Valpoi; 12.0; Tue.	R. ..	..	....
Sanvordem; N.A.	Quepem; 9.0	Quepem; 9.0; Sun.	W. ..	..	2SI(pr. m).
Margao; 12.0	Local; ..	Local .. ; Fri.	W. ..	..	2Typ; 5SI(3pr; 2h); Cs; Shigmo-Phg; Cch; 8Cpl, H, HC.
Vasco-da-Gama; N.A.	Bicholim; 4.0	Local; .. Tue.	W. ..	..	2SI(pr,m); cons Cs; 4tl; Cch.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction ; Travelling distance 2	Area (hectares); Pop; Houses ; Households ; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty ; Distance 5
Aturli; BCL. हातुर्ली ..	S 4.0	678; 684; 130; 133; 121	Bicholim; 4.0	Naroa; 2.0
Avedem; QP. अवेडे ..	S 3.0	N.A.; 1366; 176; 177; 75	Quepem; 3.0	Sanvordem-Curchorem; 10.5
Azossim; TWD. आजोसी ..	E 18.0	N.A.; 785; 157; 153; 92	Neura; 2.0	Panaji; 18.0
Bainguinim; TWD. बायंगिणी	E 6.0	N.A.; 110; 19; 22; N.A.	Old Goa; 2.0	Old Goa; 2.0
Bali; QP. बाळ्ळी ..	S 16.0	N.A.; 1762; 529; 332; 93	Local; ..	Betul; N.A.
Bambolim; TWD. बांबोळी ..	E 6.0	N.A.; 2796; 267; 303; 63	Calapur; 2.0	Panaji; 6.0
Bandoli; SNG. बांदोली ..	N 13.0	N.A.; 374; 71; 71; 99	Curchorem; 6.0	Curchorem; 6.0
Bandora; PND. बांदोरें ..	W 5.0	1205.7; 5991; 960; 1053; 427.	Local; ..	Local; ..
Barcem, QP. बार्से ..	S 23.0	N.A.; 1051; 126; 134; 510	Bali; 11.0	Panaji; 75.0
Bastora; BRD. बस्तोरें ..	E 2.0	322.2; 2297; 455; 460; 110	Mapusa; 2.0	Panaji; 14.0
Bati; SNG. भाटी ..	E 12.0	N.A.; 978; 178; 185; 126	Sanguem; 12.0	Mormugao; 65.0
Batim; TWD. भाटी ..	S 11.0	N.A.; 1247; 236; 270; 138	Goa Velha; N.A.	Agasaim; 5.0
Benaulim; SLCT. बाणावली..	W 4.0	N.A.; 7390; 1596; 1642; 800.	Local;	....
Benordem; QP. बेनुर्डे ..	S N.A.	N.A.; 325; 41; 44; 59	....	Betul; N.A
Betalbatim; SLCT. बेताळभाटी.	NW 6.0	N.A.; 2403; 503; 524; 373	Local; ..	Mormugao; 25.0
Betora; PND. बेतोडें ..	S 4.0	N.A.; 1522; 276; 276; 137	Ponda; 4.0	Nirancal; 7.0
Betqui; PND. बेतकी ..	N 21.0	N.A.; 1403; 213; 239; 224	Marcela; 7.0	Candola; 5.0
Bhuimpale; STR. भुईपाल ..	W 9.0	N.A.; 184; 31; 33; 33	Onda; 6.0	Panaji; 44.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; N.A.	Local; ..	Bicholim; 4.0; Wed.	W, t.	1; Manganese.	2SI (pr, m); Cs; Math.
Chandor; 3.5	Paroda; 5.0	Quepem; 3.0; Sun.	W.	..	3SI (pr,m,h), Cs; 4tl; 2Cpl.
Vasco-da-Gama; 19.0	Local; ..	Banastarim; 10.0; Fri.	W. ..	..	2SI (pr); tl; Cch.
Margao; 38.0	Panaji; 8.0..	Banastarim; 5.0; Fri.	W. ..	4; Laterite	Cch; St. Peter's Church.
Margao; 15.0	Margao; 15.0	Quepem; 16.0; Sun.	W. ..	..	4SI (3pr, m); 2tl; Cs; Shantadurga tl; HC.
Margao; 29.0	Panaji; 6.0..	....	W, p. ..	..	2SI (pr); mc.; Cch.
Sanvordem-Curchorem; 6.0	Curchorem; 6.0	Curchorem; 6.0; Sun.	W, spr.	..	2 SI (pr. m).
Margao; 23.0	Ponda; 5.0..	Ponda; 5.0; Wed. and Sat.	W.p.	..	12SI (10pr, 2h); Engineering College; I.T.I. College; ms; 5tl; CPl; Nagesh tl; Mahalaximi tl; Nagesh F.
Margao; 27.0	Cuncolim. 14.0	Cuncolim; 14.0; Sun.	W, spr.	..	2SI (pr.); Cs; 3tl.; Cch.
Margao; 59.0	Mapusa; 2.0	Mapusa; 2.0; Fri.	W.	..	3SI (2pr. h); Cs; Cch; 6 Cpl.
Sanvordem-Curchorem; 19.0	Sanguem; 12.0	Sanguem; 12.0; Sun.	W. t.	..	SI (pr.); Cs; Mallikarjun Fr-Mrg; tl.
....	Agasaim; 5.0	....	W.	..	3SI (2pr, m); HC; Cs; Cch.
Margao; 4.0	Margao; 4.0	....	W.	..	5SI (3pr, m, h); Cs.; Libramento Fs-Nov; Benaulim Cch Fs-Oct; H; Cch; Dp; Benaulim beach.
Margao; 30.0	Margao; 30.0	...	W.	..	SI (pr.).
Majorda; 3.0	Margao; 6.0	....	W, t.	..	3SI (2pr, h); Cs; Bartolomeo Fs-Aug; Remeti Fs-Jan; Cch; Cpl; Dp;
Margao; 24.0	Ponda; 4.0	Ponda; 4.0; Wed. and Sat.	W.	..	4SI (pr.); Cs; 2tl.
Margao; 39.0	Ponda; 25.0	Banastarim; 10.0; Fri.	W.	..	4SI (pr); cons Cs; Fr-Jan; 7tl.
Margao; 61.0	Valpoi; 9.0	Valpoi; 9.0; Tue.	W.	..	SI (pr); Santeri Maya Devi Fr; tl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectarrs); Pop Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Bicholim; BCL. डिचोली ..	....	12.2 sq.km.; 8550; 1463; 1584; 292.	Local; ..	Piligao; 5.0
Birondem; STR. भिरंडे ..	S 7.0	N.A.; 311; 55; 58; N.A.	Local; ..	Panaji; 60.0
Boma; PND. भोम ..	N 13.0	3860; 1262; 214; 220; 286	Cundaim; 2.0	Banastarim; 1.5
Boma; SNG. भोम ..	E 12.0	N.A.; N.A.; N.A.; N.A.; N.A.	Calem; 6.0	Mormugao; N.A.
Bombedem; STR. बोंबेडें ..	E 4.0	N.A.; 24; 4; 4; N.A.	Valpoi; 4.0	Panaji; 50.0
Borim; PND. बोरी ..	S 5.0	1443.6; 4994; 876; 962; 360.	Ponda; 5.0	Local; ..
Britona; BRD. बिठ्ठोण ..	S 14.0	N.A.; 3500; 565; 651; 75	Betim; 4.0	Local; ..
Cacora; QP. काकोडे ..	N. 7.5	N. A.; 5431; 972; 1002; 503	Local; ..	Naibag; 3.0
Calangute; BRD. कळंगूट ..	W 7.0	1107.3; 7600; 1464; 1484; 392.	Local; ..	Panaji; 12.0
Calapur; TWD. कालापूर ..	S 4.0	765; 6663; 1142; 1268; 671.	Local; ..	Panaji; 4.0
Calata; SLCT. कालट ..	NW 6.0	N. A.; 1,321; 201; 261; 160.	Majorda; N.A.	Mormugao; 24.0
Calem; SNG. काले ..	E 13.0	N. A.; 1474; 309; 324; 147	Local; ..	Mormugao; N.A.
Calvim; BRD. काल्वी ..	E 9.0	135.2; 521; 152; 155; 113	Mapusa; 9.0	Betim; N.A.
Camarconda; SNG. कामरखंड ..	N 17.0	N.A.; 549; 104; 104; 111	Quirl-pal; 5.0	Curchorem; 8.0
Camorlim; SLCT. कामुर्ली ..	N 9.0	N.A.; 801; 320; 350; 250	Loutulim; 1.5	Mormugao; 20.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 47.0	Local; ..	Local; Wed.	W, p, t.	1; Iron ore.	5Sl (2pr; m, 2h); 3Cs; New Monday Fr-Mrg; Shantadurga Fr-Mrg; 5tl; Cch; mq; Vet. Dp.; Typ. H.
Colem; 25.0	Valpoi; 7.0	Valpoi; 7.0; Tue.	W.	..	Sl(pr), Cch.
Margao; 33.0	Ponda; 13.0	Banastarim; 1.5; Fri.	W, p.	..	Sl(pr); Fr-Dec.; 2 tl.
Calem; 6.0	Sanguem; 12.0	Sanguem; 12.0; Sun.	R.	..	....
Colem; 35.0	Valpoi; 4.0	Valpoi; 4.0; Tue.	W.	..	....
Margao; 12.0	Ponda; 5.0	Ponda; 5.0; Wed. and Sat.	W, p.	..	7Sl(6pr: m), Cs; 5tl, Cch; Cpl.; Siddhanath hill; Siddhanath Fr-Mg.
Vasco-da-Gama; 35.0	Panaji; 4.5	Mapusa; 14.0; Fri.	W.	..	Sl(pr); 2tl; Cch;
Sanvordem-Curchorem; 2.5	Curchorem; 2.5	Curchorem; 2.5; Sun.	W.	..	8Sl(pr.); fgs.; Shigmo-Phg., Marutigad Fr; 4tl.; Cch; mq.; H.; Maruti tl.
....	Local; ..	Local; Sat.	W.	..	7Sl.(3 pr., 2m, 2h); 6 institutions; Cs; Cch; cvd; Dp; Calangute beach.
Vasco-da-Gama; 25.0	Panaji; 4.0	Mapusa; 15.0; Fri.	W, p.	..	7Sl(3 pr, 2m, 2h); Cs; Santa Cruz Fs-May-Our Lady of Rosary Fs-Jan; tl; Cch; Dp.
Majorda; N.A.	Margao; 6.0	....	W, t.	..	3Sl(2 pr, h); St. Roque Fr-Dec; Cch; Dp; dml.
Local; ..	Sanvordem-Curchorem; 8.0	Sanvordem Curchorem; 8.0; Sun.	W, r.	..	4Sl(3 pr, m); 2Cs; Kalinath Fr-Ps; 2tl; Cch; HC.
Vasco-da-Gama; N. A.	Mapusa; 9.0	Mapusa; 9.0; Fri.	W.	..	Sl(pr).
Sanvordem-Curchorem; 10.0	Amblai-Panchawadi; 4.0	Siroda; 7.0; Tue.	W, t	..	Sl(pr).
Margao; 9.0	Margao; 9.0	Ponda; 9.0; Wed. and Sat.	W, p, spr.	..	Sl(pr); St; Candelaria Fs-Nov; Cch; cvd, Ambora fountain.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari	Direction; Travelling distance	Area (hectares); Pop; Houses; Households; Agriculturists	Post office; Distance	Port/Wharf/ Jetty; Distance
1	2	3	4	5
Camurlim; BRD. कामुर्ली ..	N 8.0	760.2; 2307; 448; 480; 150	Mapusa; 8.0	Panaji; 22.0
Cana; SLCT. काणें ..	N 3.5	N.A.; 355; 62; 95; 42	Benaulim; 1.5	....
Canacona; CNC. काणकोण	E 5.0	N.A.; 2322; 372; 396; 374.	Local; ..	Talpona; 7.0
Candeapar; PND. कांडेपार	E 5.0	1110.7; 2697; 481; 489; 38.	Local; ..	Mormugao; 25.0
Candola; PND. कांदोळें	N 18.0	478; 188; 291; 350; 285.	Marcela; 5.0	Candola Tonca; 2.0
Candolim; BRD. कांदोळीं	S 12.0	628.9; 4463; 920; 938; 236.	Local; ..	Sinquerim; 2.5
Cansarvornem; PRN. कासरवर्णे ..	E 16.0	1116.0; 1169; 222; 265; N. A.	Pernem; 16.0	Panaji; 35.0
Cansaulim; MRG. कांसावली ..	S 14.0	N.A.; 1705; 310; 329; 11	Local; ..	Mormugao; 15.0
Caorem; QP. कावोरी ..	.. 12.0	N.A.; 526; 80; 105; 32	Quepem; 12.0	....
Capao; TWD. कापांव ..	E 16.0	N.A.; 186; 55; 55; 22.	Piedade; 3.0	Panaji; 16.0
Caraim; TWD. कारई ..	N 15.0	N.A.; 238; 59; 62; 62	Panaji; 15.0	Panaji; 15.0
Carambolim; TWD. करंबळी ..	W 16.0	N.A.; 3639; 502; 576; 846	Goa Velha; 3.0	Panaji; 16.0
Carambolim-Brama; STR. कर्मळी-ब्रह्मा	E 7.0	N.A.; 168; 32; 34; 16	Valpoi; 7.0	Panaji; 50.0
Carambolim-Buzroco; STR. करंबळी बुद्रुक	W 9.0	N.A.; 229; 39; 41; 58	Valpoi; 9.0	Panaji; 64.0
Caranguinim; SNG. कणगिणी .	N 8.0	N.A.; 9; 3; 3; N.A.	Curchorem; 5.0	Curchorem; 5.0

Railway station ; Distance		Motor stand; Distance		Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6		7		8	9	10	11
Vasco-da-Gama;	50.0	Mapusa;	8.0	Mapusa; 8.0; Fri.	W.	..	5Sl(4pr, m); Dairy Cs; 4tl; Cch; cvd.
Margao:	3.5	Margao,;	3.5	....	W.	..	Sl(pr).
Margao;	42.0	Bhat-pal;	N. A.	....	W, R	..	11Sl(8pr, 3m); Mallikarjun Fr-Phg, St. Francis Xavier Fs-Jan; 7tl; Cch; Mallikarjun; tl.
Local;	..	Ponda;	5.0	Ponda; 5.0; Wed. and Sat.	W.	..	6Sl(5pr, h); frp; Shantadurga Fr; 4tl; 20 Cl; Shantadurga tl.
Margao;	43.0	Ponda;	18.0	Banastarim; 7.0; Fri.	W. p.	..	5Sl(pr); cvd; 6tl; Ganapati tl; Ganapati Fr.
Margao;	50.0	Mapusa;	12.0	Calangute; 2.0; Sat.	W, spr,t.	..	5Sl(4pr, h); Cch; Fs-Aug; Shivratra Fr-Mg; Shantadurga Fr-Mrg; St. Lawrence Fs-Aug; 3tl; Cch; cvd; 2H; Dp; Aguada Fort; Candolim beach.
Margao;	70.0	Pernem;	16.0	Pernem; 16.0; Thu.	W, R,	..	4Sl(3pr; m); Cs; Mahadev Fr-Mrg; Santeridevi Fr-Ps; 3tl; PHC.
Local;	..	Local;	..	....	W.	..	3Sl(2pr, h); Cansaulim Fs-Dic; Cch.
....		Quepem;	12.0	Quepem; 12.0; Sun.	W.	..	Sl(pr); tl.
Margao;	N.A.	Panaji;	16.0	....	W.	..	Sl(pr); Cch.
....		Panaji;	15.0	....	W.	..	tl.
Margao;	46.0	Goa Velha;	3.0	Banastarim; 2.0; Fri.	W	..	4Sl(2pr, 2m); 2tl; Cch.
Colem;	38.0	Valpoi;	7.0	Valpoi; 7.0; Tue.	W, t.	..	Sl(pr); Fs-May; tl.
Colem;	N.A.	Valpoi;	9.0	Valpoi; 9.0; Tue.	W	..	Sl(pr); tl.
Sanvordem-Curchorem;	5.0	Curchorem;	5.0	Curchorem; 5.0; Sun.	W	..	....

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/Jetty; Distance 5
Caranzol; SNG. करमळ ..	NE 21.0	N.A.; 46; 18; 18; 2	Colem; 6.0	Mormugao; 68.0
Caranzol; STR. करंमळ ..	W 14.0	N.A.; 361; 74; 78; 85	Valpoi; 14.0	Panaji; 69.0
Carapur; BCL. कारापूर ..	E 4.5	862.0; 3157; 482; 572; 203	Bicholim; 4.5	Kothi; 0.5
Carmona; SLCT. कर्मणे ..	S 13.0	N.A.; 2539; 500; 636; 349	Local; ..	....
Cavelossim; SLCT. केळशी	S 14.0	N.A.; 1512; 393; 385; 260	Local; ..	....
Cavorim; SLCT. कावोरी ..	E 14.0	N.A.; 1593; 350; 67; 200	Chandor; 1.0	....
Caznem; PPN. काजने ..	W 5.0	126; 454; 59; 85; 72	Pernem; 5.0	Panaji; 31.0
Cazur; QP. काजूर ..	SE 12.0	N.A.; 222; 33; 33; 43	Quepem; 12.0	....
Chaifi; QP. चायफी ..	.. 3.0	N.A.; 29; 7; 7; N.A.	Quepem; 3.0	Sanvordem-Curchorem; 8.0
Chandel; PRN. चांदेल ..	E 18.0	603.6; 633; 111; 134; 79	Pernem; 18.0	Panaji; 38.0
Chandor; SLCT. चांदर ..	E 14.0	N.A.; 500; 175; 34; 150	Local; ..	....
Chauri; CNC. चावडी ..	.. ..	1.77 sq. km.; 1335; 260; 282; N.A.	Local; ..	Talpona; 2.0
Chicalim; MRG. चिखली ..	E 4.0	N.A.; 2358; 412; 439; 14	Local; ..	Mormugao; 8.0
Chicolna; MRG. चिकोळण ..	S 10.0	N.A.; 170; 33; 36; 3	Dabolim; 4.0	Mormugao; 10.0
Chic-Xelvona; QP. चिक-शेळवण ..	.. 9.0	N.A.; 16; 4; 4; 1	Quepem; 9.0	....

Railway station ; Distance	Motor stand ; Distance	Weekly Bazaar ; Distance ; Bazaar day	Drinking water facilities	No. of mines ; Type	Institutions and other information
6	7	8	9	10	11
Colem; 6.0	Sanguem; 21.0	Colem; 6.0; Sun.	W, spr.	2; Iron ore.	tl.
Colem; N.A.	Valpoi; 14.0	Valpoi; 14.0; Tue.	W	..	Sl(pr); Kallo-Fr-Mg; tl.
Margao; 48.0	Bicholim; 4.5	Bicholim; 4.5; Wed.	W, t, spr.	2; Iron ore.	3Sl(pr), Chaitri Paurnima-Ct; Shantadurga Fr; 3tl; Pandurang tl.
Margao; 13.0	Cavelossim; 2.0	....	t, p.	..	2Sl(pr, h); Cch; Cpl; Dp.
Margao; 14.0	Local; ..	....	W	..	3Sl(pr); Cs; Santa Cruz Fs-May; Cch; Cpl; Dp;
Chandor; 1.0	Chandor; 1.0	Igorjebhat Avenue; Sun.	W	..	Sl(pr); Cs; Cavorim Fs-Jan; cvd.
Margao; 91.0	Pernem; 5.0	Pernem; 5.0; Thu.	W	..	Sl(pr); tl.
....	Quepem; 12.0	Quepem; 12.0 Sun.	W	..	tl.
Sanvordem-Curchorem; 8.0	Paroda; 1.0	Quepem; 3.0; Sun.	W	..	tl.
Margao; 73.0	Pernem; 18.0	Pernem; 18.0; Thu.	W, spr.	..	2Sl(pr); Bld; Cs; Santeri Fr-Ps; tl; Cch;
Local; ..	Local;	Igorjebhat-Avenue; Sun.	W	..	Sl(pr); cvd; Stone Bull.
Margao; 37.0	Local;	....	W	..	3Sl(pr, 2h); St. Theresa Fs-jan; Cch; H; 2Dp; Vet. Dp.
Vasco-da-Gama; 4.0	Vasco-da-Gama; 4.0	....	W	..	3Sl(pr; m; h); St. Francis Fs-Dec; Cosmo-Damiao Fs-May; Cch; 2Cpl; tl; Bogmalo beach.
Vasco-da-Gama; 10.0	Vasco-da-Gama; 10.0	....	W	..	tl.
....	Quepem; 9.0	....	W	..	tl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Chimbel; TWD. चिंबल ..	E 7.0	396.5; 3847; 445; N.A.; 500.	Ribandar; 2.0	Ribandar; 2.0
Chinchinim; SLCT. चिंचोणें	S 8.0	N.A.; 4766; 965; 1,126; 635.	Local; ..	Betul; 8.0.
Chopdem; PRN. चोपडें ..	S 8.0	172.6; 513; 87; 98; 20	Pernem; 8.0	Local; ..
Chorao; TWD. चोडण ..	S 15.0	N.A.; 4102; 717; 779; 659	Local; ..	Panaji; 15.0
Choraundem; STR. चोरावंडे	N 14.0	N.A.; 336; 48; 63; N.A.	Valpoi; 14.0	Panaji; 60.0
Codal; STR. कोदाळ ..	E 13.0	N.A.; 124; 31; 33; 24	Valpoi; 13.0	Panaji; 67.0
Codar; PND. कोडार ..	E 6.0	N.A.; 448; 135; 80; 84	Ponda; 6.0	Local;
Codiem; STR. खोडयें ..	W 12.0	219; 101; 13; 14; 9	Onda; 6.0	Panaji; 52.0
Codqui; STR. खडकी ..	S 3.0	N.A.; 703; 129; 135; 70	Valpoi; 3.0	Panaji; 50.0
Cola; CNC. कोल ..	N 11.0	N.A.; 3256; 540; 576; 500.	Sirolim; 1.5	Saleri; 5.0
Colamb; SNG. कोळंब ..	S 27.0	N.A.; 1836; 304; 382; 257.	Rivona; 5.0	Mormugao; 70.0
Colem; SNG. कुळें ..	NE 26.0	N.A.; 1811; 353; 387; 65	Local; ..	Mormugao; 62.0
Colva; SLCT. कोलवें ..	W 6.0	N.A.; 1930; 344; 376; 40	Local; ..	Mormugao; N.A.
Colvale; BRD. कोलवाळ ..	N 8.0	1001.7; 2951; 618; 629; 100.	Local; ..	Panaji; 18.0
Compri; SNG. कोंप्रय ..	N 7.0	N.A.; 559; 101; 101; 2	Curchorem; 4.0	Curchorem; 4.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; N.A.	Ribandar; 2.0	....	W, p, t	3; Quarries.	Asylum; 5Sl(4pr; m); Bhagwati Chimbalkarin Fr-Ct; St. Barbara Fs-Dec.; Livra Febres Fs-May; Conception Fs-Dec; 4tl; 3Cch; SHC.
Margao; 8.0	Margao; 8.0	....	W, t.	..	6Sl (4pr; m h); 2Cs; Chinchinim Fs-Sept.; tl; Cch; Dp; Church of Chinchinim.
Margao; N.A.	Pernem; 8.0	Pernem; 8.0; Thu.	W.	..	Sl(pr); 2tl; Vitthal temple
....	Ribandar; 7.0	....	W, spr.	..	10;Sl (6pr; 2m; 2h); 4tl; Cch; Dp.
Colem; 45.0	Thana; 5.0	Valpoi; 14.0; Tue.	W.	..	Sl (pr); tl.
Colem; 35.0	Nagargaon; 9.0	Valpoi; 13.0; Tue.	R.	..	Sl(pr); tl.
Margao; 26.0	Ponda; 6.0	Ponda; 6·0; Wed. & Sat.;	W	..	Sl(pr); Cs; Fr-Ps; tl.
Margao; 57.0	Sanquelim; 12.0	Sanquelim; 12.0; Mon.	W.	..	Sl(pr). ..
Colem; 15.0	Valpoi; 3.0	Valpoi; 3.0; Tue.	R.	..	Sl(pr); frp; Codqui; Fr-Ct; tl.
Margao; 47.0	Agonda; 1.0	..	W. spr.	..	6Sl(pr); Fr-Mg; and Phg; 5tl; Cabo-da-Rama Fort.
Curchorem; 21.0	Local;	Rivona; 5.0; Sun.	W, spr.	15; Manganese	5Sl(pr); Ramnavami Fr-Ct; 4 tl.
Local;	Ponda; 34.0	Local; Sun.	W, spr.	5; Iron ore.	6Sl(4pr,m,h); Cs; Dairy society, HC;tl; Cch; Dp.
Margao; 6.0	Margao; 6.0	....	W.	..	2Sl(pr,h); tl; Cch; Colva beach.
Margao; 64.0	Mapusa; 8.0	Mapusa; 8.0; Fri.	W.	..	5Sl(3pr, m, h); Devi Zari Mai Fr; Rashtroli Fr; tl.
Sanvordem-Curchorem; 4.0	Curchorem; 4.0	Curchorem; 4.0; Sun.	W.	..	Sl(pr); tl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari. 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Compordem; STR. कोंपडें ..	N 6.0	N.A.; 376; 83; 87; 56	Valpoi; 6.0	Panaji; 50.0
Conquirem; STR. कणकिरें ..	S 10.0	N.A.: 290; 50; 52; 52	Birondem; 3.5	Panaji; 63.0
Consua; SLCT. कोणमुवा ..	W 6.5	N.A.; 180; 41; 43; 34	Majorda; 2.0	Mormugao; 24.0
Conxem; PND. कोनशें ..	SE 12.0	N.A.; 158; 31, 31; 34	Siroda; 8.0	Nirancal; 3.0
Cordem; QP. कोडें ..	S ..	N.A.; 728; 115; 122; 203	....	....
Corgao; PRN. कोरगांव ..	W 9.0	2138.2; 4924; 911; 763; 714.	Local; ..	Panaji; 37.0
Corjuem; BRD. कोरजुवें ..	E 8.0	488.3; 467; 108; 108; 69	Local; ..	Betim; N.A.
Corla; QP. कोर्ले ..	SE 12.0	N.A.; 57; 10; 10; N.A.;	Quepem; 12.0	..
Corlim; TWD. कोर्ली ..	W 13.0	N.A.; 1964: 367; 424; 66	Old Goa; 3.0	Panaji; 13.0
Cormonem, SNG. करमणें ..	N 16.0	N.A.; 539; 109; 120; 100	Curchorem; 10.0	Curchorem; 10.
Cortalim; MRG. कुठ्ठाळ ..	NE 12.0	N.A.; 5199; 898; 975; 191.	Local; ..	Vasco-da-Gama; 12.0
Costi; SNG. कष्टी ..	E 15.0	N.A.; 990; 240; 258; 38	Calem; 3.0	Mormugao; N.A.
Cotarli; SNG. कोटार्ली ..	S 4.0	N.A.; 524; 116; 116; 130	Sanguem; 4.0	Mormugao; 74.0
Cotigao; CNC. कोतिगांव ..	E 18.0	N.A.; 1862; 330; 337; 675	Gaodongrem; 8.0	....
Cotombi; BCL. कोठंबी ..	S 15.0	265.4; 650; 119; 141; 47	Pali; 2.0	Local;
Cotombi; QP. कोठंबी ..	N 3.0	N.A.; 857; 176; 177; 110	Quepem; 3.0	Sanvordem, Curchorem; 12.0

Railway station; Distance	Motor stand; distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of Mines; Type	Institutions and other information
6	7	8	9	10	11
Colem; N.A.	Valpoi; 5.0	Valpoi; 5.0; Tue.	W.	..	Sl(pr).
Colem; 26.5	Valpoi; 10.0	Valpoi; 10.0; Tue.	R.	..	Sl(pr); Santeri Fr-Mg; tl.
Majorda; 2.0	Margao; 6.5	....	W, t.	..	Sl(pr); Christ Fs-Nov; Cch.
Sanvordem; 25.0	Ponda; 12.0	Siroda; 8.0; Tue.	W.	..	Sl(pr); Cs; tl.
Margao; 32.0	....	....	R.	..	Sl(pr); tl.
Vasco-da-Gama, 45.0	Pernem; 9.0	Pernem; 9.0; Thu.	W, spr, t.	..	12; Sl(9pr,m, 2h); Service Cs; cons Cs; Kamleshwar Fr; Bhumika Fr; Marg; Kuldev Fr-Mrg; tls.
Vasco-da-Gama; N.A.	Mapusa; 8.0	Mapusa; 8.0; Fri.	W. ..	..	4Sl(3pr, h,); tl.
....	Quepem; 12.0	Quepem; 12.0; Sun.	W. ..	..	tl.
Margao; 30.0	Old Goa; 3.0	Banastarim; 3.0; Fri.	W. ..	..	2Sl(pr.); 2tl; Cch.
Sanvordem-Curchorem, 12.0	Curchorem; 10.0	Sanvordem; 12.0; Sun.	W. ..	3; Iron ore.	Sl(pr).
Cansaum; 15.0	Local; ..	....	W, p.	..	3Sl(2pr,h); CS; Fr-Aug; Fr-Nov; Cch; 2Cpl; HC.
Calem; 3.0	Sanguem; 15.0	Sanvorden; Curchorem; 11.0; Sun.	W, r, t.	1; Iron ore.	Sl(pr); Bld; Ramnath Fr-Phg; tl; Cch.
Sanvordem-Curchorem; 10.0	Sanguem; 4.0	Sanguem; 4.0; Wed.	Spr.	..	Sl (pr.); tl.
....	Partagal; 14.0	....	W, r.	..	4Sl (pr); Cs; Mallikarjun Fr-Phg; tl.
Margao; N.A.	Pali; 2.0	Usgao; 5.0; Sun.	W.	3; Manganese.	Sl(pr); VKSS; tl; Chandreshwar tl.
Chandor; 2.0	Paroda; 2.0	Quepem; 3.0; Sun.	W, t.	..	2Sl(pr.); fgs; Cotombi Fr; tl; Cpl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/Jetty; Distance 5
Cotorem; STR. कोतोरें ..	S 6.5	N.A.; 427; 83; 87; 36..	Birondem; 3.0	Panaji; 50.0
Cudcem; STR. कुडशें ..	W 4.0	N.A.; 329; 65; 68; 41..	Valpoi; 4.0	Panaji; 54.0
Cudnem; BCL. कुडणें ..	E 11.0	973.8; 1928; 312; 345; 225.	Sanquelim; 3.0	Amona; 5.0
Cuelim; MRG. कुवेली ..	S 15.0	N.A.; 1169; 234; 234; 11	Cansaulim; 2.0	Mormugao; 14.0
Cujira; TWD. कुजरा ..	SE 5.0	168; 776; 135; 144; 58	Calapur; 1.5	Panaji; 5.0
Cumarconda; STR. कुमारखंड	E 8.0	419; 263; 49; 51; 47 ..	Valpoi; 8.0	Panaji; 50.0
Cumbari; SNG. कुंमारी ..	E 18.0	N.A.; 97; 18; 20; 20 ..	Sanguem; 18.0	Mormugao; 90.0
Cumbarjuva; TWD. .. कुंमारजुवें	N 20.0	N.A.; 3566; 585; 594; 383	Local; ..	Panaji; 20.0
Cunchelim; BRD. कुचेली	N 2.0	197.3; included in Mapusa Municipality.	Mapusa; 2.0	Panaji; 10.0
Cuncoliem; PND. कुंकळ्ये..	N 13.0	516.2; 1229; 196; 211; 14	Mhardol; 5.0	Cundaim; 4.0
Cuncolim; SLCT. कुंकळ्ळीं	S 13.0	N.A.; 10796; 2325; 2295; 800	Local;	Mormugao; 49.0
Cundaim; PND. कुंडय ..	NW 12.0	733; 2902; 448; 540; 550	Local;	Local;
Curca; TWD. कुर्का ..	SE 9.0	N.A.; 1609; 250; 326; 207	Goa Velha; 3.0	Panaji; 9.0
Curchirem; BCL कुडचिरें ..	N 7.0	N.A.; 1131; 210; 210; 153	Bicholim; 7.0	Panaji; 36.0
Curchorem; QP. कुडचडें ..	N 7.0	N.A.; 6460; 1119; 1269; 61	Local; ..	Margao; N.A..
Curdi; SNG. कुर्डी ..	S 12.0	N.A.; 1701; 355; 364; N.A.	Local; ..	Mormugao; 50.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Colem; 15.0	Valpoi; 6.5	Valpoi; 6.5; Tue.	R.	..	Sl(pr.); Cotorem Fr-Ps.
Colem; N.A.	Valpoi; 4.0	Valpoi; 4.0; Tue.	R.	..	Sl(pr.)
Margao; N.A.	Sanquelim; 3.0	Sanquelim; 3.0; Mon.	W.	3; 1 Manganese, 2, Iron ore.	3Sl (2pr., m); frp; ms; Betal Fr-Mg; 2tl.
Cansaulim; 2.0	Cansaulim; 2.0	....	W.	..	3Sl(pr); Cuelim Fr-Jan; tl; Cch.
Vasco-da-Gama; 24.0	Panaji; 5.0	Mapusa; 15.0; Fri.	W, p.	..	Cch.
Margao; 60.0	Valpoi; 8.0	Valpoi; 8.0; Tue.	W.	..	Sl (pr.); tl.
Sanvordem-Curchorem; 27.0	Sanguem; 18.0	Sanguem; 18.0; Sun.	W, r,	5; 1 Iron ore, 4, Manganese.	Sl (pr); Mallikarjun Fr- Ps; tl.
Margao; 35.0	Local; ..	Banastarim; 6.0; Fri.	W, p.	..	8Sl (5pr.2m,h); Cs; tl; Cch; 2D,.
Vasco-da-Gama; 30.0	Mapusa; 2.0	Mapusa; 2.0 Fri.	W	..	Sl(Pr); fgs; tl; Cch.
Margao; 13.0	Ponda; 13.0	Mhardol; 5.0; Mon.	W	..	2Sl(pr); frp; 2tl.
Margao; 13.0	Local;	Local; Sun. & Tue.	W	..	16Sl(9pr, 2m, 5h); Cs. Saude Fs; Cch; mq; Dp;
Margao; 32.0	Ponda; 12.0	Banastarim; 3.0; Fri.	W, p.	..	6Sl(5pr, h); 2frp; 3tl; SHC; Navadurga Fr.
Margao; 27.0	Agasaim; 6.0	....	W	..	3Sl(2pr; m); tl; Cch; Cvd; Dp; MCW.
Margao; 55.0	Bicholim; 7.0	Bicholim; 7.0; Wed.	W	1; Manganese.	3Sl(2pr, m), Mahadev Fr. tl.
Local; ..	Local;	Local; Sun and Wed.	W, T	..	9SL (6pr, 3h); 3 Dp; Maruti tl; Maruti Fr; Cs.
Sanvordem-Curchorem; 17.0	Sanguem; 12.0	Sanguem; 12.0; Sun.	W, r, t	5; Iron ore	.. 5Sl(4pr; h); 2Cs; Chaitri; Paurnima-Ct; Church Fs-Jan; 5tl; Cch; Dp

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari	Direction; Travelling distance	Area (hectares); Pop; Houses; Households; Agriculturists	Post office; Distance	Port/Wharf/ Jerry; Distance
1	2	3	4	5
Curpem; SNG. कुर्पे ..	S 15.0	N.A.; 916; 232, 236; 113	Curdi; 3.0	Mor-mugao; 53.0
Curti; PND. कुट्टी ..	N 3.0	737.4; 2484; 154; 155; 88	Ponda; 3.0	Khan-deapar; 1.0
Curtorim; SLCT. कुडतरीं ..	E 9.0	N.A.; 10319; 1392; 1498; 1200	Local; ..	....
Dabem; STR. दाबें ..	W 5.0	N.A.; 289; 54; 57; 59	Valpoi; 5.0	Panaji; 50.0
Dabolim; MRG. दाबोळी ..	E 6.0	N.A.; 418; 98; 107, 14	Chi-calim; 3.0	Mormu-gao; 6.0
Damocem; STR. दामोषें ..	S 7.5	N.A.; 375; 75; 79; 79;	Biron-dem; 1.0	Pana-ji; 61.0
Darbandora; SNG. धार-बांदोडें	N 26.0	N.A.; 1728; 338; 342; 463	Pon-da; 15.0	Mor-mugao; 58.0
Dargalim; PRN. धारगळ ..	S 8.0	1969.9; 3798; 589; 709; 640	Local; ..	Panaji; 22.0
Davem; STR. धावें ..	E 6.0	N.A.; 501; 94; 99; 67 ..	Valpoi; 6.0	Panaji; 57.0
Davorlim; SLCT. दवरली ..	E 4.0	N.A.; 1699; 168; 150; N.A.	Aquem; 2.0	....
Derodem; STR. देरोडे ..	E 14.5	N.A.; 53; 13; 18; 18	Val-poi; 14.5	Panaji; 67.0
Deussua; SLCT. देवसुवा ..	S 8.0	N.A.; 1187; 348; 381; 285	Chin-chin'm; 2.0	Betul; 8.0
Dicarpale; SLCT. दिकार्पाल..	I 4.0	N.A.; 900; 330; N.A.; 65	Aquem; 3.0	....
Dongor; SNG. डोंगर ..	E 18.0	N.A.; 52; 4; 10; 7	San-guem; 18.0	Mormu-gao; 86.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Sanvordem-Churchorem; 20.0	Sanguem; 15.0	Sanguem; 15.0; Sun.	W, spr.	9, Iron ore	2Sl(pr); Madhavnath Fr. Ps; 3tl; Cch.
Margao; 23.0	Ponda; 3.0	Ponda; 3.0; Wed. and Sat.	W, p.	..	3Sl(pr); fgs; Fr-Ps; 2tl.
Chandor; 4.0	Local;	....	W, t.	..	8Sl(6pr; 2h); St. Rita; Fs; St. Minguel Fs; Rama Fr-Ct Cch; 2H.
Colem; N.A.	Valpoi; 5.0	Valpoi; 5.0; Tue.	W	..	Sl(pr); tl.
Local; ..	Vasco-da-Gama; 6.0	....	W	..	2Sl(pr); HC; aerodrome.
Colem; 24.0	Valpoi; 7.5	Valpoi; 7.5; Tue.	R	..	Sl (pr); Shantadurga Fr-Mg.
Sanvordem; 19.0	Ponda; 15.0	Ponda; 15.0; Wed. and Sat.	W, spr.	3;1 Manganese, 2 Iron ore.	7Sl(pr); Cs; Dhareshvari Fr; tl.
Margao; 55.0	Macasana; 2.0	Pernem; 8.0; Thu.	W	..	9Sl(pr); 2Cs; Dhareshwar Shigmo-Phg; 11tl; Cch; mq; Dp; Shantadurga tl; HC.
Colem; 32.0	Nagargaon; 2.0	Valpoi; 6.0; Tue.	W, spr.	..	Sl(pr); tl.
Margao; 4.0	Margao; 4.0	....	W	..	2Sl(pr); Cs.
Colem; N.A.	Nagargaon; 10.0	Valpoi; 14.5; Tue.	W	..	tl.
Margao; 8.0	Margao; 8.0	....	W, t.	..	3Sl(pr, m, h); Deussua Fs-Jl; Cch; Lake.
Margao; 4.0	Margao; 4.0	....	W.	..	Sl (pr); Cch.
Sanvordem-Curchorem; 23.0	Sanguem; 18.0	Sanguem; 18.0; Sun.	R, t, spr.	..	Cs.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households ; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Dongurli; SNG. डोंगर्ली ..	E 10.0	N.A.; N.A.; N.A.; N.A.; N.A.	Calem; 8.0	Mormu-gao; N.A.
Dramapur; SLCT. धर्मापूर ..	S 5.0	N.A.; 1152; 336; 351; 317	Loca ; ..	....
Duda'; SNG. दुधाळ ..	N 13.0	N.A.; 239; 36; 37; 6	Local; ..	Mormu-gao; N.A.
Dumacem; BCL. दुमाशें ..	NW 23.0	347; 5; 187; 25; 28; 37	Pirna; 10.0	Panaji; 32.0
Duncolim; SLCT. दुकळीं ..	NW 5.0	N.A.; 377; 76; 78; 21 ..	Margao; .0	....
Durbate; PND. दुर्भाट ..	SW 5.0	1025·9; 5697; 878; 980; 304	Queula; 3.0	Local; ..
Durgavado; TWD. दुर्गावाडी	S 4.0	N A.; 609; 95; 105; 13	Panaji; 4.0	Mormu-gao; 6.0
Edorem; STR. हेदोडें ..	N 6.0	N.A ; 165; 17; 18; 15	Valpoi; 6.0	Panaj ; 51.0
Ella, TWD. ऐला ..	E 10.	N.A.; 535; 82; 90; 19	Loca';	Local; ..
Fatorpa; QP. फातर्पें ..	S 16.0	N.A.; .005; 352; 361; 330	Bali; 4.0	Betul; 16.0
Gandaulim; SLCT. गंडावळी..	NW 5.0	N.A.; 312; 57; 58; N.A.	Margao; 5.0	....
Gandaulim; TWD. गंडावळी..	W 16.0	N.A.; 207; 49; 49; 10	Panaji; 16.0	Panaji; 16.0
Gangem; PND. गांजें ..	NE 20.0	N.A.; 347; 49; 57; 40	Usgao; 5.0	Local; ..
Gaondongrem, CNC. गांवडोंगरें ..	N 14.0	N.A.; 2851; 392; 422; 495	Local; ..	....
Goalim-Moula; TWD. गोळया-मोळा ..	E 12.0	N.A.; 501; 70; 88; 62	Panaji; 12.0	Panaji; 12.0
Goa-Velha; TWD. पोरलें गोवें	E 11.0	N.A.; 3828; 610; 664; 239	Local; ..	Panaji; 11.0
Gocoldem; QP. गोकोळडें ..	S 45.0	N.A.; 261; 29; 29; 83	....	....

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Calem; 8.0	Sanguem; 10.0	Sanguem; 10.0; Sun. and Wed.	R. spr.	..	....
Margao; 5.0	Margao; 5.0	....	W.	..	S'(pr); Cs; Dramapur. Fs-Oct; Cch.
Sanvordem-Curchorem; 14.0	Sanguem; 13.0	Sanguem; 13.0; Wed. and Sun.	W, spr.	5; 2 Manganese, 3 Iron ore	Sl (pr); 2tl; Ccb; Dp.
Margao; N.A.	Pirna; 10.0	Assonora; 9.0; Tue.	W.	..	2Sl(pr); Dumac.m Fr; 5tl.
Margao; 5.0	Margao; 5.0	....	W.	..	Cpl.
Margao; 23.0	Ponda; 5.0	Ponda; 5.0; Wed. and Sat.	W, p.	..	4Sl(3pr, h); 2 cons Cs; Fr-Mar; 2tl; Cpl.
Vasco-da-Gama; 11.0	Panaji; 4.0	Mapusa; 15.0; Fri.	W.	..	tl; Cpl.
Colem; 35.0	Valpoi; 6.0	Valpoi; 6.0; Tue.	W.	..	....
Margao; 36.0	Panaji; 10.0	Banastarim; 6.0; Fri.	W, p.	..	Sl(pr); St. Francis Xavier Fs-Dec; 4 Cch; tl; Basilica of Bom Jesus; See Cathedral; Church of St. Francis Assisi.
Margao; 17.0	Local; ..	Cuncolim; 7.0; Sun.	W, r.	..	6Sl(5pr, m); Cs; Shantadurga Kunkallikarin Fr.; 4tl, Cch.
Margao; 5.0	Margao; 5.0	....	W.	..	Cpl.
Margao; N.A.	Panaji; 16.0	....	W.	..	tl.
Margao; 40.0	Ponda 20.0	Usgao; 5.0; Sun.	W, r.	..	Sl(pr.); Cs, tl.
....	Local; ..	....	W, t.	..	7Sl(6pr, m); Cs; Mallikarjun Fr-Phg; tl, SHC.
Margao; N.A.	Panaji; 12.0	....	W.	..	Sl(pr.).
Vasco-da-Gama; N.A.	Panaji; 11.0	Banastarim; 10.0; Fri.	W.	..	6Sl(2pr, m, h); 2Cs; 2tl; Cch; Cpl; 2Dp; HC.
Margao; 40.0	....	....	W.	..	Sl (pr).

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Golauli; STR. गोळावली ..	N 13.0	N.A.; 166; 27; 38; 21	Valpoi; 13.0	Panaji; 65.0
Goltim-Navelim; TWD. .. गळटीं-नावेली	N 14.0	N.A.; 2711; 590; 619; 221.	Local; ..	Pidade; N.A.
Gonteli; STR. घोटेली ..	N 21.0	N.A.; 676; 98; 135; 82	Local; ..	Panaji; 50.0
Govanem, STR. गांवणें ..	S 11.5	N.A.; 191; 46; 48; N.A.	Valpoi; 11.5	Panaji; 55.0
Guirdolim; SLCT. गिर्दोली ..	E 14.0	N.A.; 20,44; 540; 104; 400.	Chandor; 1.0	....
Guirim; BRD. गिरी ..	S 3.0	402.5; 3,705; 613; 628; 356.	Mapusa ; 3.0	Betim; 9.0
Guleli; STR. गवळुली ..	S 8.5	N.A.; 319; 50; 52, 52	Birondem; 2.5	Panaji; 62.5
Gululem, STR. गुळुले ..	N 29.0	N.A.; 464; 72; 91; 101	Gonteli; 5.0	Panaji; 54.0
Ibrampur; PRN. इब्रामपूर ..	E 22.0	628.3; 870; 130; 175; 252.	Pernem; 22.0	Panaji; 44.0
Issorssim; MRG. इसर्शे ..	W 10.0	N.A.; 218; 37; 39; 17	Vasco-da-Gama; 10.0	Mormugao, 10.0
Ivrem; Buzruco—STR. .. इवरें-बुद्रुक	N 15.0	N.A.; 363; 56; 69; 81	Valpoi; 15.0	Panaji; 66.0
Ivrem; Curdo—STR. .. इवरें-खुर्द	N 14.0	N.A.; 148; 28; 30; 20	Valpoi; 14.0	Panaji; 65.0
Jua; TWD. जुवें ..	E 20.0	N.A.; 384'; 734; 825; 232.	Local; ..	Old Goa; 11.0
Latambarcem; BCL. .. लाटंबार्शे	W 10.0	3652; 3981; 784; 797; 477.	Assonora; 2.0	Panaji; 24.0
Loliem; CNC. लोलये ..	S 20.0	N.A.; 4278; 891; 939; 563.	Mashem; 5.0	Mashem; 5.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Colem; 50.0	Thana; 5.0	Valpoi; 13.0; Tue.	W.	..	Sl(pr); tl.
Margao; 40.0	....	Banastarim; 9.0; Fri.	W.	..	Asilo of St. Francis Xavier; Institute for the poor; 5Sl (3pr, m. h); Cs, 4tl; Cch; HC; MCW.
Margao; 55.0	Sanquelim; 8.0	Sanquelim; 8.0; Mon.	W.	..	3Sl (2pr,m); 2Cs; fgs; ms; Ramnavami Fr-Ct; 2tl; SHC.
Colem; 6.0	Colem; 6.0	Valpoi; 11.5: Tue.	W.	1;Manganese.	Sl (pr).
Chandor; 1.0	Chandor; 1.0	Igorje-Avenue; bhat N.A; Sun.	W.	..	3Sl(2pr, h); Cch; cvd; fountain.
Vasco-da-Gama; N.A.	Mapusa; 3.0	Mapusa; 3.0; Fri.	W.	..	4Sl (2pr, m,h); Cs; 3tl; Cch; cvd.
Colem; 25.0	Valpoi; 8.5	Valpoi; 8.5; Tue.	W, t.	..	Sl(m); Shantadurga Fr-Ps; tl.
Margao; 59.0	Sanquelim, 12.0	Sanquelim; 12.0; Mon.	W, t.	..	Sl (pr); Fr-Mg; tl; Vagueri Hill.
Margao; 87.0	Salem; 3.0	Pernem; 22.0; Thu.	W, t.	..	2Sl(pr); Santeri Fr-Ps; 4tl.
Vasco-da-Gama; 10.0	Vasco-da-Gama; 10.0	....	W.	..	Sl(pr); tl.
Colem; 52.0	Thana; 5.0	Valpoi; 15.0; Tue.	W.	..	Sl(pr).
Colem; 50.0	Thana; 5.0	Valpoi; 14.0; Tue.	W.	..	Sl(pr); tl.
Margao; N.A.	Local;	Banastarim; 5.0; Fri.	W.	..	11Sl (5pr, 4m, 2h); HC; Dp; 3tl; Cch; 3Cpl; Fort of Sambaj; Jtra Fr-Dec; Dattatraya Fr-Mg.
Margao; 50·0	Assonora; 2.0	Assonora; 2.0; Tue.	W.	1; Manganese.	7Sl(4pr, 2m, h); Cs; Shantadurga Fr, Vyanketesh Fr; Kalikadevi Fr-Ct; 9tl; Kalikadevi tl.
Margao; 57.0	Local;	....	W, t.	..	18Sl (12 pr, 4m, 2h); Cs; Nirakar Fr-Ct; 5tl; Cch; Dp; Keshav tl; Damodar tl; Nirakar tl.

Village/Town name in English; Taluka abbreviation ; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop ; Houses ; Households; Agriculturists 3	Post office ; Distance 4	Port/Wharf/ Jetty ; Distance 5
Loutulim ; SLCT. लोटलीं ..	N 10·0	N.A.; 4677; 900; 1035; 650.	Local; ..	Mormu-gao, 20.0
Macasana ; SLCT. मासजन	E 13.0	N.A.; 1746; 4 0; 430; 400.	Curto-rim; 4.0	....
Maem ; BCL. मयें ..	W 4·0	2049.7; 4977; 918; 986; 584.	Bicho-lim; 4.0	Naroa; 2.0
Maina ; QP. मार्णि ..	E 12·0	N.A.; 278; 43; 54; 61	Que-pem; 12.0	....
Majorda ; SLCT. माजोर्डे ..	NW 7.0	N.A.; 2046; 429; 455; 350.	Local; ..	Mormu-gao; 23.0
Malar ; TWD. मालार ..	E 15.0	N.A.; 1399; 306; 319; 230	Piedade; 1.0	Old Goa; 3.0
Maloli ; STR. माळोली ..	E 11.0	N.A.; 56; 12; 15; 16	Valpoi; 11.0	Panaji; 63.0
Malpona ; STR. मळपण ..	S 13.0	N.A.; 92; 20; 21; 2	Biron-dem; 10.0	Panaji; 65.0
Man 'rem ; TRN. मान्द्रें ..	S 13.0	1889·4; 6078; 922; 1183; 941.	Local; ..	Chop-dem; 5.0
Mandur ; TWD. मंडूर ..	E 17·0	N.A.; 3209; 613; 677; 473	Neura; 1.0	Panaji; 17.0
Mangal ; QP. मागाळ ..	S 12·0	N.A.; 171; 26; 27; 41	Que-pem; 12.0	Betul; N.A.
Mapusa ; BRD. म्हापसें ..	.. ..	11.4 sq. kms.; 20001; 3277; 3476; 215.	Local; ..	Betim; 10.0
Marcaim ; PND. मडकय ..	W 14·0	1045.9; 5224; 890; 971; 636.	Mhar-dol; 5.0	Local; ..
Margao ; SLCT. मडगांव ..	.. ..	23.72 sq. kms.; 48593; 8126; 8607; 221.	Local; ..	Mormu-gao; 28·0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance ; Bazaar day	Drinking water facilities	No. of mines ; Type	Institutions and other information
6	7	8	9	10	11
Margao; 10.0	Margao; 10.0	....	W, p. t, spr.	2; Granite	4Sl (3pr, h); 2Cs; St. Sebastian's Fs-Jan; Our Lady of Mercy Fs-Feb; Cch; 4Cpl; fountain; Mount Cpl.
Chandor; 3.0	....	....	W.	..	2Sl(pr, h); Cs; Cch.
Margao; N.A.	Local; ..	Bicholim; 4.0; Wed.	W, t.	2; 1 Manganese, 1 Iron Ore.	8Sl (5pr, 3m); 2Cs; Satpurush Fr-Ct; Kelbai Fr-Mrg; Mahamaya Fr-Mrg; 4tl; Dp. Maem Lake.
....	Quepem; 12.0	Quepem; 12.0; Sun.	W.	..	Sl (pr).
Local; ..	Margao; 7.0	....	W, t.	..	3Sl(2pr, h); Cs; Mae-de Deus Fs-May; Boa Morte Fs-Aug; Dp; Cch.
Margao; 50.0	Panaji; 15.0	....	W.	..	Sl(pr); 2tl; Cch; Cpl.
Colem; 38·0	Nagargaon; 6.0	Valpoi; 11.0; Tue.	W, spr.	..	tl.
Colem; 5.0	Colem; 5.0	Valpoi; 13.0; Tue.	W.	..	Sl(pr); tl.
Margao; 43.0	Pernem; 13.0	Siolim; 7.0; Wed.	W, t.	..	7Sl(4pr. 2m, h); Cs; 8tl; Cch.; PHC.
Vasco-da-Gama; 18.0	Local; ..	Banastarim; 17.0 Fri.	W.	..	5Sl(pr); HC; MCW; 4tl; Cch.
Vasco-da-Gama; N.A.	Quepem; 12.0	Quepem; 12.0; Sun.	W.	..	tl.
Margao; 45.0	Local; ..	Local; Fri.	W, p.	..	12Sl; 2 Clgs; 3Cs; 2 cons Cs; Bodgeshwar Fr-Ps; Milagres Fs-Apr-May; 6tl; Cch; 14 Cpl.; Hospitals; 20 Dp; Vet.; Dp; mq.
Margao; 34.0	Ponda; 14.0	Mhardol; 5.0; Mon.	W.	..	9Sl(8pr, h); Navadurga Fr-Ps; HC; 10tl; Navadurga; tl.
Local; ..	Local; ..	....	W, p.	..	24Sl (15pr, 9h); 2 Clgs.; 1 tr. Clg; 4Cs; Dindi-Kt; 4 tl; Cch; Hospitals; 50 Dp.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop ; Houses; Households ; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Marna ; BRD. मार्ना ..	W 8·0	328.8; 753; 192; 192; 67	Mapusa; 8.0	Betim; N.A.
Massordem ; STR. मासोर्डे ..	S 1 0	N.A.; 465; 88; 67; 35	Valpoi; 1.0	Panaji; 55.0
Maulinguem; BCL. मावळींगे ..	N 6·0	N.A.; 869; 168; 178; 217	Bicholim; 6.0	Panaji; 34.0
Maulinguem; SNG. मावळींगें ..	E 7·0	N.A.; 135; 22; 22; 8	Calem; 5.0	Mormugao; N.A.
Mauzi; STR. माऊस ..	W 3·0	N.A.; 608; 114; 119; 56	Valpoi; 3.0	Panaji; 50.0
Maytem; BRD. मयटं ..	E 12·0	88·5; 692; 117; 135; 149	Bicholim; 3.0	Colvale; N.A.
Melauli; STR. मेळावली ..	S 16·0	N.A.; 738; 123; 129; 129	Birondem; 9.0	Panaji; 68.0
Mencurem; BCL. मेणकुरे ..	NW16·0	392·7; 978; 159; 179; 22	Assonora; 10.0	Panaji; 30.0
Mercurim; TWD. मेरकुरे .	W 16·0	N.A.; 4592; 660; 767; 330	Agasaim; 1.5	Agasaim; 1.5
Moira Nachinola; BRD. .. मइइं-नाचनोळे	E 3·0	638·3; 3573; 819; 841; 406	Local; ..	Mormugao; 47.0
Moissal; SNG. मैसाळ ..	N 15·0	N.A.; N.A.; N.A.; N.A.; N.A.	Curchorem; 6.0	Curchorem; 6·0
Molcarnem; QP. मळकर्णे ..	E 14·0	N.A.; 1064; 235; 236; 127	Sanguem; 6.0	Mormugao; 50.0
Molcopona; QP. मळकपण ..	....	N.A.; 261; 53; 53; 32	Sanguem; 5.0	Betul; N.A.
Molem; SNG. मळे ..	NE 39·0	N.A.; 642; 136; 139; 100	Local; ..	Mormugao; 68.0
Mopa; PRN. मोप ..	NE 15·0	874·5; 685; 86; 135; 145	Pernem; 15.0	Caznem; N.A.
Morambi-o-Grande; TWD. थोरली मोरंबी	SE 2·0	N.A.; 1188; 210; 225; 73	Panaji; 2.0	Panaji; 2.0
Morambi-o-Pequeno; TWD. धाकटी मोरंबी	SE 2·0	N.A.; 1254; 212; 247; 46	Panaji; 2.0	Panaji; 2 0
Morgim; PRN. मोर्जी ..	S 13·0	855.5; 5378; 869; 1099; 375	Mapusa, 11.0	Local; ..

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Vasco-da-Gama; N.A.	Mapusa; 8.0	Mapusa; 8.0; Fri.	W.	..	Sl (pr); tl.
Colem; 51.0	Valpoi, 1.0	Valpoi; 1.0; Tue.	W.	..	Sl(pr ; tl.
Margao; 54·0	Bicholim; 6.0	Bicholim; 6.0; Wed.	W.	..	2Sl(pr, m); Cs.; Santeri Fr; 2tl.
Calem; 5.0	Sanguem; 7.0	Sanguem; 7. ; Wed.	W, spr.	..	Sl(pr); tl.
Colem; 22.0	Valpoi; 3·(	Valpoi; 3.0; Tue.	W.	..	Sl(pr); tl.
Vasco-da-Gama; N.A.	Bicholim; 3.0	Bicholim; 3.0; Wed.	W.	..	Sl(pr); tl.
Colem; 18.0	Valpoi; 16.0	Valpoi; 16.0; Tue.	W, r.	3; Manganese.	3Sl(pr); Santeri,Fr-Ps; tl.
Margao; 60.0	Pirna; 2.5	Assonora; 1·0; Tue.	W.	..	2Sl(pr, m); Cs; Mauli Fr-Mrg; 2tl; HC.
....	Agasaim; 1.5	Banastarim; 8.0; Fri.	W.	..	5Sl (3pr, m, h,); Cs.; tl.; Cch.
Vasco-da-Gama; 47.0	Mapusa; 3.0	Mapusa; 3.0; Fri.	W.	..	5Sl (3pr, m, h.); Cs; Moira Fs-Dec.; Nachinola Fs-Jan; tl; Cch; Ram; tl.
Sanvordem-Curchorem; 6·0	Curchorem; 6.0	Curchorem; 6.0; Sun.	Spr.	..	....
Sanvordem Curchorem; 12.0	Sanguem; 6.0	Sanguem; 6.0; Wed. and Sun.	W, spr.	6; Manganese.	5Sl(4pr; m); Mallikarjun Fr; 4tl; Cch.
Sanvordem; N.A.	Sanguem; 5.0	Sanguem; 5.0; Sun.	W.	..	Sl(pr); tl.
Colem; 6.0	Ponda; 28.0	Colem; 6.0; Sun.	W.	2; Iron ore.	2Sl(pr); Mahadev Fr; 2tl; Dudh Sagar.
Margao; N.A.	Pernem; 15.0	Pernem; 15.0; Thu.	W.	..	Sl(pr); tl.
Margao; 30.0	Panaji; 2.0	....	W. p.	..	Cch.
Margao; 30.0	Panaji, 2.0	....	W.	..	Sl(pr); Cch.
Margao; N.A.	Siolim; 5.0	Siolim; 5.0; Wed.	W.	..	10Sl(6pr; 3m; h); Cs; Morjai Fr; Mrg; Cch-Fs-May-3tl; Cch; HC.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling Distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Morlem; STR. मोर्ले ..	E 24·0	N.A.; 1082; 160; 256; 106	Sanquelim; 7.0	Panaji; 42.0
Morpirla; QP. मोरपिर्ले ..	S 18·0	N.A.; 766; 107; 110; 379	Quepem; 18.0	Betul; N.A.
Mugulli; SNG. मुगळी ..	W 4·0	N.A.; 396; 71; 77; 90	Sanguem; 4.0	Mormugao; 74·0
Mulem; SLCT. मुळें ..	SE 10·0	N.A.; 1054; 208; 221; 163	Quepem; 4.0	Curchorem; 10.0
Mulgao; BCL. मुळगांव ..	W 4.5	758.2; 1993; 337; 376; 244	Assonora; 2.0	Sirigao; 1.0
Murda; TWD. मुर्डी ..	S 2.0	N.A.; 3048; 433; 529; 175	Calapur; 1.5	Panaji; 2.0
Nagargao; STR. नगरगांव ..	E 6.0	N.A.; 411; 75; 79; 37	Valpoi; 6.0	Panaji; 50.0
Nagoa; SLCT. नागवें ..	N 10.0	N.A.; 1829; 380; 375; 600	Verna; N.A.	....
Nagorcem-Palolem; CNC. नगर्से-पालोलें	W —	N.A.; 6663; 1196; 1223; 495.	Local; ..	Mormugao; 60.0
Nagvem; QP. नागवें ..	E —	N.A.; 282; 55; 56; 63	Sanguem; 2.0	Betul; N.A.
Nagvem; STR. नागवें ..	S 3.0	N.A.; 51; 10; 10; N.A.	Valpoi; 3.0	Panaji; 50.0
Naiquinim; SNG. नायकिणी ..	E 15.0	N.A. 196; 47; 47; 31	Sanguem; 15.0	Vasco-da-Gama; 89.0
Nanelim; STR. नाणेली ..	N 8.0	N.A.; 95; 23; 24; 19	Valpoi; 8.0	Panaji; 53.0
Nanorem; STR. नानोडें ..	E 12.5	N.A.; 260; 48; 50; 43	Valpoi; 12.5	Panaji; 64.0
Nanus; STR. नानूस ..	S 3.0	N.A.; 644; 81; 94; 37	Valpoi; 3.0	Panaji; 50.0
Naquerim; QP. नाकेरी ..	W 26.0	N.A.; 1,682; 336; 346; 86	Betul; 4.0	Betul; 4.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 59.0	Sanquelim; 7.0	Sanquelim; 7.0; Mon.	W, t.	1; Manganese.	2Sl(pr); Kelbai Fr-Mg; 2tl; Morlemgad.
Sanvordem; N.A.	Quepem; 18.0	Quepem; 18.0; Sun.	W.	..	2Sl(pr); Shri Bhumipurush Devasthan.
Sanvordem-Curchorem; 10.0	Sanguem; 4.0	Sanguem; 4.0; Sun. and Wed.	W, spr.	1; Manganese.	Sl(pr); Mahadev Fr-Mrg; tl.
Chandor; 7.0	Quepem; 4.0	Quepem; 4.0; Sun.	W.	..	2Sl(pr); Kalo Fr-Mrg; 2tl; Cch.
Margao; 50.0	Assonora; 2.0	Assonora; 2.0; Tue.	W, spr.	2; Iron ore.	4Sl(2pr, m, h); Cs; Mahamaya Fr-Ps; HC; 5tl; Mahamaya tl.
Margao; 30.0	Panaji; 2.0	....	W, p.	..	5Sl(4pr, m); Cch; Cpl.
Colem; 37.0	Valpoi; 6.0	Valpoi; 6.0; Tue.	W, t.	..	2tl.
Cansaulim; 5.0	....	....	W.	..	3Sl(pr, m, h); St. Piedade Fs-Oct; St. Bocarro Fs-Dec; Cch; Nagoa spring.
Margao; 37.0	Local; ..	....	W, r.	..	8Sl(5pr, 2m, h); Cs; Fisherman Cs; Nirakar Fr-Ct; St. Roque Fs-May; 3tl; Cch; Palolem beach.
Sanvordem; N.A.	Sanguem; 2.0	Sanguem; 2.0; Sun.	W.	..	Sl(pr); tl.
Colem; 45.0	Valpoi; 3.0	Valpoi; 3.0; Thu.	W.	..	tl.
Sanvordem-Curchorem; 26.0	Sanguem; 15.0	Sanguem; 15.0; Sun.	W, t.	1; Manganese	Cs; tl; Nagnath Fr-Mg.
Colem; 42.0	Thana; 3.0	Valpoi; 8.0; Tue.	W.	..	Sl(pr); tl.
Colem; 38.0	Valpoi; 12.5	Valpoi; 12.5; Tue.	Spr.	..	Sl(pr); ms; 2tl.
Colem; 45.0	Valpoi; 3.0	Valpoi; 3.0; Tue.	W.	..	3Sl(pr); Mahadev Fr-Ct; mq; tl; Nanus Fort.
Margao; 20.0	Velim; 6.0	....	W, spr.	1; Manganese	5Sl(4pr, m); Sasandev Fr-Phg; 2tl; Cch; mq; Betul beach.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Naroa; BCL. नार्वे ..	S 6.5	715.6; 1594; 267; 292; 320.	Bicholim; 6.5	Local;
Naroa; TWD. नार्वे ..	E 15.0	N.A.; 405; 68; 80; 24	Piedade; 1.5	Local;
Navelim; BCL. नावेली ..	S 13.0	1,038; 1663; 256; 300; 165	Sanquelim; 7.0	Amona; 7.0
Navelim; SLCT. नावेली ..	S 1.0	482.4; 5475; 1000; 1000; 400	Local; ..	Mormugao; 45.0
Nerul; BRD. नेरुल ..	S 8.0	674; 6093; 946; 965; 282	Local; ..	Candolim; 1.0
Nesai; SLCT. नेसय ..	E 6.0	N.A.; N.A.; 711; N.A.; 428	Curtorim; 5.0	....
Netorlim; SNG. नेतर्ली ..	N 22.0	N.A.; 1298; 281; 292; 161	Local; ..	Mormugao; 66.0
Neura-o-Grande; TWD. थोरलें नेवरें ..	SE 15.0	N.A.; 940; 165; 180; 137	Local; ..	Panaji; 15.0
Neuro-o-Pequeno; TWD. धाकटें नेवरें ..	SE 15.0	N.A.; 513; 85; 93; 95	Local; ..	Panaji; 15.0
Nirancal; PND. निरंकाल ..	SE 13.0	N.A.; 1079; 201; 208; 169	Dhabal; 4.0	Local;
Nundem; SNG. नुंदे ..	N 30.0	N.A.; 501; 103; 103; 120	Netorlim; 6.0	Mormugao; 72.0
Nuvem; SLCT. नुवें ..	N 5.0	N.A.; 5151; 951; 1035; 632.	Local; ..	Mormugao; 21.0
Oder; QP. होडर ..	N 9.0	N.A.; 430; 75; 75; 24	Quepem; 9.0	Betul; N.A
Onda; STR. होंड ..	W 12.0	N.A.; 1375; 184; 220; 209	Local; ..	Panaji; 40.0
Orgao; PND. वरगांव ..	N 17.0	849.8; 2360; 393; 426; 181	Marcela; 1.0	Marcela; 1.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 51.0	Local; ..	Bichc-lim; 6.5; Wed.	W, t.	..	2Sl(pr, m); Cs; Gokulashtami Fr-Sra; 7tl; Saptakoteshwar tl.
Margao; 56.0	Panaji; 15.0	....	W.	..	Sl(pr); tl; Cch; Cpl.
Margao; N.A.	San-quelim; 7.0	San-quelim; 7.0; Mon.	W, t.	..	Sl(pr), Cs; Lakshmi Narayan Fr-Mg; 3tl.
Margao; 1.0	Margao; 1.0	....	W, p, t.	..	12Sl(10pr, 2m); Rosary Fs-Nov; Cch; frp; H; Dp.
....	Local; ..	Ma-pusa; 18.0; Fri.	W.	..	5Sl(5pr, 3m, h); Cs; St. Remedios Fs-Oct; St. Rosario Fs-May; Cch; cvd; Red Cross HC.
Margao, 6.0	Mar-gao; 6.0	....	W.	..	4Sl(3pr. m); Fs-May; Cch; HC.
Sanvordem, 26.0 Curchorim;	San-guem; 22.0	San-guem; 22.0; Sun. and Wed.	W, spr.	18; Manganese.	4Sl(2pr, m, h); Cs; Mahalaximi Fr-Dattatraya Fr; 13tls; Cch; HC; Mahalaximi tl; Gopinath tl.
Vasco-da-Gama; N.A.	Local; ..	Banas-tarim; 12.0; Fri.	W.	..	2Sl(m,h); Cs; 2tl; Cch;
Vasco-da-Gama; 18.0	Aga-saim; 1.0	Banas-tarim; 12.0; Fri.	W.	..	Sl(pr); tl.
Sanvordem; 25.0	Ponda; 13.0	Siroda; 8.0; Tue.	W.	..	4Sl (pr); cons Cs; Fr-Mg; tl.
Sanvordem-Curchorem; 32.0	San-guem; 30.0	San-guem; 30.0; Sun. and Wed.	Spr.	2; Manganese.	Sl(pr); Mahamaya Fr; 2tl.
Margao; 5.0	Margao; 5.0	....	W, t, spr.	2; Stone quarries,	10Sl (7pr, 2m; h), Cs; Clg. Mae-de Pobres. Fs-Nov; Cch; Dp
Sanvordem-Curchorem; N.A.	Querem; 9.0	Que-rem; 9.0; Sun.	W.	..	Sl (pr).
Margao; 55.0	San-quelim; 5.0	San-quelim; 5.0; Mon.	W. spr.	1; Iron ore	2Sl (pr, m); 2Cs; fgs; ms; Kalo-Ps; 4tl.
Margao; 37.0	Ponda; 17.0	Banas-tarim; 2.0; Fri.	W, p.	1; Manganese.	5Sl (4pr; m), Fr-Ps; 3tl.

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Orlim; SLCT. ओर्ली ..	S 13.0	N.A.; 1543; 400; 350; 192	Local; ..	....
Oxel; BRD. ओशेल ..	N 14.0	281.2; 2291; 429; 438; 139	Siolim; 2.5	Siolim; 2.5
Oxel; SNG. ओशेल ..	E 14.0	N.A.; N.A.; N.A.; N.A.; N.A.	Calem; 6.0	Mor- mugao; N.A.
Padelim; STR. पाडेलीं ..	SW 9.0	N.A.; 399; 75; 79; 79	Biron- dem; 2.0	Panaji; 62.0
Padi; QP. पाडी ..	S ..	N.A.; 156; 24; 24; 58	..	....
Pale; BCL. पाळ ..	E 20.0	1297.7; 5124; 1097; 1161; 113.	Local; ..	Vel- guem; 1.5
Pale; STR. पाळ ..	N 8.0	N.A.; 318; 86; 104; 97	Valpoi; 8.0	Panaji; 57.0
Paliem; PRN. पालयें ..	S 16.0	924.2; 1945; 260; 364; 336.	Quiran- pani; 1.0	Reddi; 6.0
Panaji; TWD. पणजी ..	....	37 sq. kms; 34,953; 5638; 6178; 105.	Local; ..	Local; ..
Panelim; TWD. पानवेल ..	E ..	Included in Panaji Urban Agglomeration.	Old Goa; 3.0	Old Goa; 3.0
Parcem; PRN. पार्से ..	S 9.0	1013.5; 3352; 424; 589; 915	Local; ..	Panaji; 30.0
Paroda; SLCT. पारोडें ..	S 11.0	N.A.; 964; 173; 185; 105	Que- pem; 3.0	Cur- chorem; 10.0
Parra; BRD. पर्रा ..	S 3.5	503.7; 2368; 526; 544; 182.	Local; ..	Siolim; 8.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 13.	Cavelossim; 5.0	....	W.	..	2 I (pr,h), Bom Jesus Fs-Jan; St. Minguel, Fs-Oct; Cch; tl; H.
....	Siolim; 2.5	Siolim; 2.5; Wed.	W.	..	3Sl (2pr, m); cons Cs; 2tl; Cch.
Calem; 6.0	Sanguem; 14.0	Sanguem; 14.0; Sun.	R.	..	....
Colem; 23.0	Valpoi; 9.0	Valpoi; 9.0; Tue.	R.	1; Iron ore.	Sl(m); Santeri Fr-Ps; tl.
Margao; 28.0	Margao; 28.0	....	W.	..	tl.
Margao; 28.0	Local; ..	Usgao; 4.0; Sun.	W, p, Spr, t.	5; Iron ore.	7Sl (4 pr, 2m; h), 3Cs; Navadurga Fr; 4tl, Dp;HC; Navadurga tl.
Colem; 43.0	Thana; 2.0	Valpoi; 8.0; Tue.	W.	..	Sl(pr); Santeri Fr-Ps; tl.; Vet. Dp.
....	Pernem; 16.0	Amberem; 3.0; Sat.	W, t, spr.	..	4Sl(pr), 2Cs; 7tl; Cch; dml.
Vasco-da-Gama, (*via* Dona Paula 8 kms, *via* Agasaim) 32 kms.	Local ..	.... ..	W, p, spr.	..	17Sl(10 pr, 7h); 6 clgs; Maruti Fr-Mg; Mahalaxmi Fr-Sra, Immaculate Conception Fs-Dec; 16Cs; 4tl; Cch; 15Cpl; mq; 2cvd; 3H; Vet. Dp; dg; Miramar beach; Dona Paula, Children's Park at Campal.
Margao; 39.0	Panaji;	Banastarim; 5.0; Fri.	W.	..	Sl(pr); tl.
Mormugao; 40.0	Chopdem; 5.0	Pernem; 9.0; Thu.	W, t.	..	5Sl(4pr, m); Cs; Bhagwati Fr-Mrg; 8tls.
Chandor; 7.0	Quepem; 3.0	Quepem; 3.0; Sun.	W.	..	Sl(pr); Chaitri Paurnima Ct; 4tl; Cch.
Margao; 50.0	Mapusa; 3.5	Mapusa; 3.5; Fri.	W.	..	Sl(pr); Cs; St. Anne's Fs-Feb; Cch; cvd.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households ; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Patiem; SNG. पाट्यें ..	N 9.0	N.A.; 43; 7; 7; 5 ..	Sanguem; 9.0	Mormugao; N.A.
Pendral; STR. प्रेंद्राल ..	W 14.0	N.A.; N.A.; N.A.; N.A.; N.A.	Valpoi; 14.0	Panaji; 69.0
Pernem; PRN. पेडणें ..	.. ..	2.5 sq. kms; 3302; 334; 501; 500.	Local; ..	Nalbag; 3.0
Pilerne; BRD. पिळर्णे ..	SW 10.0	1164.6; 2028; 401; 433; 319	Betim; 4.0	Panaji; 7.0
Piliem; SNG. पिळयें ..	N 30.0	N.A.; 733; 138; 138; 63	Darbandora; 4.0	Mormugao; 52.0
Piligao; BCL. पिळगांव ..	S 4.5	766.4; 1993; 326; 376; 303.	Bicholim; 4.5	Local; ..
Pirla; QP. पिर्ले ..	SE 12.0	N.A.; 294; 37; 55; 67;	Quepem; 12.0	Betul; N.A.
Pirna; BRD. पिर्ण ..	E 14.0	970.8; 1721; 307; 310; 290	Local; ..	Panaji; 27.0
Pissurlem—STR. पिसुर्ले ..	W 13.0	N.A.; 1439; 263; 275; 145	Onda; 2.0	....
Podocem; STR. पोडशे ..	W 20.0	N.A.; 309; 60; 63; 22	Sanquelim; 2.0	Panaji; 38.0
Poingulnim; CNC. पैंगिण ..	S 10.0	N.A.; 4435; 886; 902; 460	Local;	Talpona; 8.0
Pomburpa-Valavli; BRD. पोंबुर्पे-वळावली	E 9.0	639.1; 3501; 669; 738; 299	Local ;	Local;
Ponchavadi; PND. पंचवाडी	S 18.0	1530; 3256; 614; 621; 296	Siroda; 5.0	Local;

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance ; Bazaar day	Drinking water facilities	No. of mines ; Type	Institutions and other information
6	7	8	9	10	11
Calem; 7.0	Sanguem; 9.0	Sanguem; 9.0; Sun.	R.	..	....
Colem; N.A.	Valpoi; 14.0	Valpoi; 14.0; Tue.	W.	..	Sl(pr); tl.
.... ..	Local; ..	Local; Thu.	W, spr.	..	5Sl (3pr, 2h); Dassera-An; 10tl; mq; Cch; 10Dp; Vet. Dp; H.
Margao; 49.0	Calangute; 5.6	Calangute; 5.6; Sat.	W, t.	3; Laterite.	3Sl(pr); Cch.
Sanvordem; 25.0	Ponda; 9.0	Usgao; 5.0; Sun.	W, spr.	..	2Sl(pr). Bhumikadevi Fr-Mg; tl.
Margao; N. A.	Local; ..	Bicholim; 4.5; Wed.	W.	1; Manganese	4Sl(3pr, h); Cs., Shantadurga Fr; 4tl, Shantadurga tl.
Sanvordem; N.A.	Quepem; 12.0	Quepem; 12.0; Sun.	W.	..	SL (pr); tl.
Margao; N.A.	Mapusa; 14.0	Mapusa; 14.0; Fri.	W, t.	..	3Sl (2pr, m); 2Cs; Shantadurga Fr; St. Francis Xavier Fs-Dec; 9tl.
Margao; 57.0.	Sanquelim; 7.0	Sanquelim; 7.0; Mon.	W, t.	5; 2Manganese, 3 Iron ore.	4Sl (3pr, m); Cs; 2tl; Dp.
Margao; 54.0	Sanquelim; 2.0	Sanquelim; 2.0: Mon.	T.	..	2Sl(pr); tl.
Margao; 47.0	Chauri; 10.0	....	W, t.	..	13Sl(7pr, 5m, h); 2FPC MCW; Cs; Shri Ram Jatra-Ct; Parshuram Fr-Phg; Shri Samsthan Partagal Math; Parshuram tl; Betal tl; Galjibag and Talpona beach.
Margao; 45.0	Aldona; 8.0	Aldona; 8.0; Sat.	W.	..	7Sl(3pr, 3m; h); 2tl; Cch; 2Cpl; cvd; Dp; fountain.;
Sanvordem; 8.0	Sanvordem; 8.0	Siroda; 5.0; Tue.	W, p.	..	9Sl(7pr, 2h); 2Cs(cons. and milk); Fr-Ps; 2tl; Cch; Cpl.

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Ponda; PND. फोंडे ..	.. ..	5.3 sq. kms.; 7658; 1300; 1388; 64.	Local;	Durbate; 6.0
Ponocem; STR. पणसें ..	W 17.0	312; 270; 38; 40; 31	Pale; 6.0	Panaji; 58.0
Ponsuli; STR. पणसुली ..	N 29.0	N.A.; 181; 25; 37; 37	Gonteli; 5.0	Panaji; 55.0
Poriem; STR. पर्ये ..	E 22.0	N.A.; 2400; 451; 473; 600	Sanquelim; 4.0	Panaji; 40.0
Porteem; SNG. पट्टें ..	S 15.0	N.A.; 316; 65; 67; 93	Curdi; 3.0	Mormugao; 56.0
Potrem; SNG. पत्रें ..	E 8.0	N.A.; 156; 32; 33; 32	Sanguem; 8.0	Mormugao; 70.0
Priol; PND. प्रियोळ ..	N 8.0	1362.6; 5159; 660; 888; 366.	Mhardol; 3.0	Marcaim; 4.0
Quedem; QP. केडें ..	S 23.0	N.A.; 215; 34; 34; 60	Bali; 11.0	Panaji; 76.0
Quelaudem; STR. केळावडें	N 28.0	N.A.; 206; 30; 40; 36	Gonteli; 4.0	Panaji; 54.0
Quelossim; MRG. केळशी ..	E 14.0	N.A.; 1755; 303; 311; 95	Cortalim; 5.0	Vasco-da-Gama; 14.0
Quepem; QP. केपें ..	.. ..	1.18 sq. kms.; 2925; 548; 566; 60.	Local;	Betul; 9.0
Querim; PND. केरीं ..	N 11.0	N.A.; 2755; 477; 497; 84	Mhardol; 7.0	Savoi-Verem; 5.0
Querim; PRN. केरीं ..	W 20.0	236; 2346; 379; 461; 183	Quiranpani; 5.0	Tiracol; 2.0
Querim; STR. केरी ..	N 25.0	N.A.; 1115; 162; 210; 132	Gonteli; 1.0	Panaji; 51.0
Queula; PND. कवळें ..	W 3.0	1025.9; 5697; 878; 980; 304.	Local;	Durbate; 3.5
Quisconda; QP. किस्कोण	.. ..	N.A.; 210; 30; 30; 41	....	....

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Margao; 18.0	Local;	Local; Wed. and Sat.	W, p.	..	10Sl(8pr, 2h), Cs, 2tl, mq, dg, Cch, Cpl, Safa Masjid.
Margao; 52.0	Pale; 6.0	Pale; 6.0; Thurs.	W.	..	Sl(pr); Shantadurga Fr-Ps; tl.
Margao; 60.0	San-quelim; 13.0	San-quelim; 13.0; Mon.	W.	..	Sl(pr); tl.
Margao; 56.0	San-quelim; 4.0	San-quelim; 4.0; Mon.	W, t.	..	5Sl(4pr, m); 2Cs; ms; Saptashatibhumika Fr. Ps; 5tl.
Sanvordem-Curchorem; 23.0	San-guem; 15.0	San-guem; 15.0; Sun.	W, r.	..	Sl(pr).
Sanvordem-Curchorem; 18.0	San-guem; 8.0	San-guem; 8.0; Sun.	W, t.	2; 1 Manganese, 1 Iron ore.	Cs; tl.
Margao; 26.0	Ponda; 8.0	Mhar-dol; 3.0; Mon.	W, p.	..	9Sl(7pr, 2h); 2Cs; 8tls; Cch; Manguesh Fr; Mahalasa Fr; Manguesh tl; Mahalasa tl.
Margao; 27.0	Cun-colim; 14.0	Cun-colim; 14.0; Sun.	W, spr.	..	Sl(pr); 2 tl.
Margao; 59.0	San-quelim; 12.0	San-quelim; 12.0; Mon.	W, t, spr.	..	Sl(pr); tl.
Cansaulim; 17.0	Cor-talim; 5.0	....	W, p.	..	2Sl(pr); Fs-Dec.; Cch; Cpl.
Sanvordem; 7.0	Local;	Local; Sun.	W, p.	..	3Sl(pr, 2h); HC; Typ; 2Cs; 3tl; Cch.
Margao; 30.0	Ponda; 11.0	Mhar-dol; 7.0; Mon.	W.	..	6Sl(5pr, m); cons; Cs; 2tl; Vijayadurga tl; Vijayadurga Fr.
Sanvordem; N.A.	Tiracol; 2.0	Per-nem; 20.0; Thurs.	W, t, spr.	..	3Sl(2pr, m); cons; Cs; tl; Ravalnath Fr.
Margao; 56.0	San-quelim; 9.0	San-quelim; 9.0; Mon.	W, t.	..	3Sl(2pr, m), tl; Ramnavami Fr-Ct.
Margao; 20.0	Ponda; 3.0	Ponda; 3.0; Wed. and Sat.	W, p.	..	6Sl(3pr, m; 2h); Shantadurga Fr, 3tl; Shantadurga tl.
Margao; 42.0	....	....	W.	..	tl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Quitol; QP. किटोळ ..	W 30.0	N.A.; 363; 68; 68; 128	Quepem; 30.0	Betul; N.A
Rachol; SLCT. रायतूर ..	N 8.0	N.A.; 1700; 280; 298; 160	Local;	....
Raia; SLCT. राय .	N 8.0	N.A.; 5468; 990; 1075; 468	Local;	....
Reis Magos; BRD. रैजमाग	S 4.0	N.A.; N.A.; N.A.; N.A.; N.A.	Betim; 2.5	Betim; 2.5
Renovadi; TWD. रेनावडे ..	SE 3.0	N.A.; 136; 27; 27; N.A.	Panaji; 3.0	Panaji; 3.0
Revora-Nadora; BRD. रेवोडें-नादोडें ..	N 11.0	1252.6; 2928; 451; 533; 338	Local;	Betim; N.A.
Rivem; STR. रिवें ..	N 14.0	N.A.; 138; 15; 19; 18	Valpoi; 14.0	Panaji; 63.0
Rivona; SNG. रिवण ..	S 22.0	N.A.; 2934; 571; 578; 300	Local;	Mormugao; 65.0
Rumbrem; SNG रुमडें ..	N 14.0	N.A.; 77; 24; 24; N.A.	Curchorem; 5.0	Curchorem; 5.0
Salai; BRD. सालय ..	N 12.0	N.A.; N.A.; 583; 625;305	Betim; 7.0	Britona; 2.5
Salauli; SNG. साळावली ..	E 5.0	N.A.; 455; 99; 101; 45	Sanguem; 5.0	Mormugao; N.A.
Salcli; STR. साळेली ..	W 10.0	N.A.; 526; 73; 95; 84	Onda; 5.0	Panaji; 42.0
Salem; BCL. साळ ..	N 16.0	104.4; 1692; 308; 365; 261.	Assonora; 10.0	Panaji; 30.0
Saligao; BRD. साळगांव ..	S 6.0	598.2; 4033; 832; 842; 333.	Local; ..	Betim; 9.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Sanvordem; N.A.	Quepem; 30.0	Quepem; 30.0; Sun.	W.	..	2Sl (pr); Shri Betal Devasthan.
Margao; 8.0	Local;	....	W.	..	2Sl (pr); Carnival Fs.; Rachol Seminary; Cch.
Margao; 8.0	Local;	....	W.	15; Laterite	7Sl (5pr. 2h), Cs, Cch, 4Cpl; 4Dp.
Vasco-da-Gama; 38.0	Betim; 2.5	....	W.	..	5Sl (3pr, m, h), Fisheries Cs; cons Cs; Reis Magos Fr-Jan; Krishnanath Fr-Mar; 5tl; Cch; PHC; 2 Dp; Kogdivol.
Margao; 32.0	Panaji; 3.0	....	W.	..	Cch.
....	Local;	Mapusa; 11.0; Fri.	W.	..	6Sl (5pr, h); Fisheries Cs; cons; Cs; 3tl; Cch; cvd, Dp.
Colom; 47.0	Thana; N.A.	Valpoi; 14.0; Tue.	R.	..	tl.
Curchorem; 16.0	Local;	Local;	W, spr.	9; 5 Manganese; 4 Iron ore	7Sl (4pr, 3m); HC; Dp; Library; Club; 2Cs.; Shigmo Phg; 10tl; Cch; Damodar tl; Vimaleshwar tl.
Sanvordem-Curchorem; 5.0	Curchorem; 5.0	Curchorem; 5.0; Sun.	spr.	..	....
Vasco-da-Gama; 42.0	Panaji; 9.0	Mapusa; 12.0; Fri.	W.	..	4Sl (3pr, m); cons. Cs; Ravalnath Fr-Mg; 2tl; Cch; 4Cpl.
Sanvordem-Curchorem; N.A.	Sanguem; 5.0	Sanguem; 5.0; Sun.	spr.	3; Manganese.	Sl (pr.); tl; Kalnath Fr-Ps.
Margao; 60.0	Sanquelim; 10.0	Sanquelim; 10.0; Mon.	W, t.	..	Sl(pr); Cs; 2tl; Santeri Fr.
Margao; N.A.	Local; ..	Assonora; 10.0; Tue.	W.	..	4Sl(2pr, m, h);Cs;Bhumikadevi; Fr. Ramnavami Fr-Ct; 3tl; FPC;
Vasco-da-Gama; 30.0	Mapusa; 6.0	Calangute; 4.0; Sat.	W.	..	3Sl (pr, 2h); Cs; 2tl; Cch; 3Cpl.

Village/Town name in English; Taluka abbreviation ; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty; Distance 5
Sancoale; MRG. सांकवाळ ..	E 10.0	N.A.; 4959; 628; 680; 41	Cortalim; 2.0	Cortalim; 2.0
Sancordem; SNG. सांकोर्डे ..	N 33.0	N.A.; 2508; 606; 628; 34	Local; ..	Panaji; 55.0
Sangod; SNG. सांगोड ..	NE 36.0	N.A.; 806; 168; 191; 64	Malem; 9.0	Mormugao; 64.0
Sangolda; BRD. सांगोल्डें ..	N 4.0	330.4; 1621; 364; 380; 111.	Saligao; 4.0	Panaji; 8.0
Sanguem; SNG. सांगें ..	....	5.4 sq. kms.; 5006; 903; 905; 110.	Local; ..	Mormugao; 70.0
Sanquelim; BCL. सांखळी ..	E 7.5	41.2; 3166; 532; 588; 80	Local; ..	Cotombi; 3.0
Santona; SNG. सांतोण ..	N 22.0	N. A.; 737; 134; 192; 20	Curchorem; 8.0	Curchorem; 8.0
Sanvorcem; STR. सांवर्शे ..	S 4.0	N. A.; 203; 27; 46; 88	Valpoi; 4.0	Panaji; 48.0
Sanvordem; SNG. सांवर्डे ..	N 7.0	N. A.; 2157; 378; 445; 45	Curchorem; 2.0	Sanvordem-Curchorem; 2.0
Sanvordem; STR. सांवर्डे ..	W 5.0	N. A.; 513; 107; 112; 45	Valpoi; 5.0	Panaji; 55.0
Sarvona; BCL. सरवण ..	E 2.5	N. A.; 900; 154; 164; 112.	Bicholim; 2.5	Kothi; 2.0
Sarzora; SLCT. सार्जोर ..	S 9.0	N. A.; 1676; 426; 459; 350.	Chinchinim; 2.0	Betul; 12.0
Satorem; STR. सातोरें ..	N 4.0	N. A.; 133; 60; 18; 15.	Valpoi; 4.0	Panaji; 58.0
Satrem; STR. सत्रे ..	E 15.0	N. A.; N. A.; 6; 6; 10.	Valpoi; 15.0	Panaji; 67.0
Savoi-Verem; PND. सावय वेरे ..	N 16.0	N. A.; 2727; 427; 442; 91.	Local;	Local;

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance Bazaar day	Drinking water facilities	No .of mines; Type	Institutions and other information
6	7	8	9	10	11
Dabolim; 5.0	Cortalim; 2.0	....	W, p, t, spr.	..	5Sl(3pr, m, h); Cs; Cch; tl.
Colem; 17.0	Ponda; 23.0	Ponda; 23.0; Wed. and Sat.	W, r.	4; Iron ore.	4Sl(3 pr, h); Bld; Cs; Dairy society; fgs; S. Kantilal cons Cs; Mahadev Fr-Mrg; 4tl.
Colem; 15.0	Ponda; 12.0	Ponda; 12.0; Wed. and Sat.	W. spr.	8; Iron ore.	Sl(pr); dairy society; 2tl.
Margao; N.A.	Mapusa; 4.0	Mapusa; 4.0; Fri.	W.	..	Sl(pr); Cs; Mae-de-Deus Fs-May; Libra-mento Fs-August; Cch; cvd;
Sanvordem; 6.0	Local; ..	Local; .. Sun. and Wed.	W, p.	..	10Sl(8pr, 2h); Cs; Dp; Vet. Dp; tl; Cch; mq.
Margao; 42.0	Local; ..	Local; .. Mon.	W, p.	1; Iron ore.	4Sl(2pr, m, h); 3 Institutions; 2Cs; Datta Jayanti Ps; Chaitri; Paurnima-Ct; 3 tl; mq; dml; cvd; H; Dp; Datta Mandir; Cch.
Sanvordem-Curchorem; 8.0	Curchorem; 8.0	Curchorem; 8.0; Sun.	W	2; Iron ore.	Sl(pr).
Colem; 43.0	Valpoi 4.0	Valpoi; 4.0 Tue.	W.	..	Sl(pr); dairy Society; Saptah-Mg; tl.
Curchorem; 2.0	Curchorem; 2.0	Curchorem; 2.0; Sun.	W.	2; Manganese.	4Sl(3pr, m); 2Cs; Betal Fr-Mg; 3 tl; Dp.
Colem; N. A.	Valpoi; 5.0	Valpoi; 5.0; Tue.	R.	2; Manganese.	2Sl(pr); Kalo Fr-Mg; tl.
Margao; 48.0	Bicholim; 2.5	Bicholim; 2.5; Wed.	W, t, spr.	1; Iron ore.	2Sl(pr); Cs; Shampurush Fr-Mrg; tl.
Margao; 9.0	Margao; 9.0	Cuncolim; 4.0; Sun.	W.	..	2Sl(pr); Cs; Cpl.
Colem; 54.0	Valpoi; 4.0	Valpoi; 4.0; Tue.	W.	..	Sl(pr); tl.
Colem, N. A.	Nagargaon; 11.0	Valpoi; 15.0; Tue.	R.	..	tl.
Margao; 34.0	Ponda; 16.0	Banastarim; 11.0; Fri.	W.	..	10Sl(8pr. 2h); Kalo Fr-Kt; 5 tl; Cch; HC; Ananta tl.

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Seraulim; SLCT. सिरावली	NW 4.0	N. A.; 739; 142; 155; 40.	Local; ..	....
Sigao; SNG. शिगांव ..	NE 23.0	N. A.; 2172; 446; 481; 198.	Colem; 6.0	Mor-mugao; 68.0
Sigonem; STR. शिगोणे ..	N 13.0	N. A.; 69; 14; 15; 8.	Valpoi; 13.0	Panaji; 60.0
Siolim; BRD. शिवोली ..	NW 10.0	1119.7; 7382; 1389; 1420.	Local; ..	Panaji; 25.0
Siranguli; STR. शिरांगुळी ..	S 9.5	N. A.; 45; 9; 9; N. A. ..	Biron-dem; 6.0	Panaji; 53.0
Siridao; TWD. शिरदांव ..	E 15.0	N. A.; N. A.; N. A.; N. A.; N. A.	Goa Velha; 2.0	Panaji; 15.0
Sirigao; BCL. शिरगांव ..	W 6.0	370.9; 1428; 234; 262; 141.	Asso-nora; 2.0	Local; ..
Sirlim; SLCT. शिर्ली ..	S 6.0	N. A.; 724; 188; 194; 138.	Drama-pur; 5.5	....
Siroda; PND. शिरोडे ..	SE 12.0	N.A.; 9322; 1713; 1796; 1068.	Local; ..	Local; ..
Siroli; STR. शिरोली ..	N 25.0	N.A.; 405; 62; 86; 59 ..	Gonteli; 1.0	Panaji; 51.0
Sirsodem ; STR. शिरसोडें	S 11.0	N.A.; 106; 14; 15; 11	Biron-dem; 8.0	Panaji; 57.0
Sirvoi ; QP. शिरवय ..	E 0.5	N.A.; 3367; 680; 688; 359.	Que-pem; 0.5	Betul; 10.0
Socorro ; BRD. सोकोरे ..	E 5.0	N.A.; N.A.; 1000; 1020; 900.	Local;	Betim; N A.
Sonal ; STR. सोनाळ ..	W 8.0	N.A.; 227; 36; 38; 41	Valpoi; 8.0	Panaji; 63.0
Sonauli ; SNG. सोनावळी ..	NE 31.0	N.A.; 106; 32; 32; 17	Colem; 8.0	Mormu-gao; 70.0
Sonus-Vonvoliem ; STR. सोनुस-वनवळयें	W 17.0	N.A.; 56; 62; 76; 41	Onda; 4.0	Panaji; 46.0
St. Jacinto Island ; MRG. सां. ज्यासींतु बेट	E 8.0	N.A.; N.A.; N.A.; N.A.; N.A.	Chica-lim; 4.0	Local;

Railway station ; Distance	Motor stand ; Distance	Weekly Bazaar ; Distance ; Bazaar day	Drinking water facilities	No. of mines ; Type	Institutions and other information
6	7	8	9	10	11
Margao; 4.0	Margao; 4.0	....	W.	..	Sl(pr.); HC; Cs.
Colem; 6.0	Sanguem; 23.0	Colem; 6.0; Sun.	W.	5; Iron ore.	2Sl(pr.); Mahadev Fr; 5 tl.
Colem; 48.0	Valpoi; 13.0	Valpoi; 13.0; Tue.	T.	..	tl.
Margao; N. A.	Mapusa; 10.0	Local; .. Wed.	W.	..	9Sl(6 pr; 3h), HC; Cch.
Colem; 8.0	Valpoi; 9.5	Valpoi; 9.5; Tue.	R.	..	Sl (pr).
Vasco-da-Gama; N. A.	Panaji; 15.0	Banastarim; N.A.; Fri.	W.	..	2Sl(pr); tl; Cch; Siridao beach.
Margao; 53.0	Assonora; 2.0	Assonora; 2.0; Tue.	W, t.	2; Iron ore.	2Sl(pr, m); tl; Lairai tl; Lairai Fr.
Margao; 6.0	Margao; 6.0	Chinchinim; 3.5; N.A.	W.	..	Sl(pr); Cs; Sirlim Fr-Oct; Cch.
Sanvordem; 13.0	Ponda; 12.0	Local; Tue.	W.	..	22Sl(19pr, m, 2h); cons.; Cs; 16tl; HC; Kamaxi Fr; Kamaxi tl; Shivnath tl.
Margao; 56.0	Sanquelim; 9.0	Sanquelim; 9.0; Mon.	W.	..	Sl(pr); Kalo Fr-Mg; tl.
Colem; 9.0	Colem; 9.0	Valpoi; 9.0; Tue.	R.	..	....
Sanvordem; 8.0	Quepem; 0.5	Quepem; 0.5; Sun.	W.	..	3Sl(2pr,m); HC.
....	Mapusa; 5.0	Mapusa; 5.0; Fri.	W, p.	..	7Sl(5pr, 2m); Cs; Cch; H; Dp.
Colem; N.A.	Valpoi; 8.0	Valpoi; 8.0; Tue.	R.	1; Manganese	Sl(pr); ms; tl.
Local ;	Ponda; 42.0	Colem; 8.0; Sun.	W. spr.	..	2tl.
Margao; 51.0	Sanquelim; 7.0	Sanquelim; 7.0; Mon.	W. spr.	2; 1 Manganese, 1 Iron ore.	2Sl(pr), Rawalnath Fr-Ps; tl.
Dabolim; 6.0	Vasco-da-Gama; 8.0	....	W, spr.	..	Sl (pr), St Jacinto Fs—Sept; Cch; Cpl.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/Jetty; Distance 5
Sulcorna ; QP. सुळकर्ण ..	.. 12.0	N.A.; 190; 43; 43; 27	Quepem; 12.0	Betul ; N.A.
Surla ; BCL. सुर्ले ..	E 16.0	N.A.; 5422; 610; 662; 295.	Local;	Local ;
Surla (Tambdi) ; SNG. सुर्ल (तांबडी)	N 40.0	N.A.; 571; 116; 116; 62	Sancordem; 7.0	Panaji; 60.0
Surla ; STR. सुर्ले ..	N 22.0	N.A.; 349; 45; 54; 51	Valpoi; 22.0	Panaji; 72.0
Talaulim ; SLCT. तळावली	S 2.0	N.A.; 1510; 325; 349; 300	Navelim; 1.5	Mormugao; 46.0
Talaulim ; TWD. तळावली	.. 10.0	N.A.; 468; 76; 90; 60	Goa Velha; 3.0	Panaji; 10.0
Taleigao ; TWD. ताळगांव ..	SW 5.0	N.A.; 6957; 1168; 1248; 522.	Local;	Dona Paula; 2.0
Talvorda ; SLCT. तळवर्डे ..	E 18.0	N.A.; 749, 115· 174; 75.	Cuncolim; 5.0	Mormugao. 53.0
Tamboxem ; PRN. तांबोशें ..	.. 9.0	144.3; 497; 77; 88; 77,	Pernem; 9.0	Caznem; N.A.
Telaulim ; TWD. तळावली ..	S 4.0	246.3; 1426; 256; 259; 75.	Ponda; 4.0	Durbate; 1.0
Thana ; STR. ठाणे ..	N 9.0	N.A.; 1072; 138; 160; 132.	Valpoi; 9.0	Panaji; 59.0
Tiloi; QP. तिळय ..	.. ..	N.A.; 29; 4; 4; 8 ..	Margao; 15.0	....
Tiracol, PRN. तेरेखोल ..	S 25.5	157.7; 166; 47; 47; 5 ..	Quiranpani; 7.0.	Reddi; 5.0
Tivim-Sirsaim; BRD. थिवीं-शिरसई ..	NE 9.0	2311; 5730; 1140; 1189; 559	Local; ..	Local; ..
Tivrem; PND. तिवरे ..	N 16.0	210.7; 712; 111; 123; 147	Marcela; 2.0	Morcela; 2.0
Torxem; PRN. तोरसें ..	N 14.0	964.3; 1574; 243; 288; 77	Local; ..	Caznem; N.A.
Tudou; SNG. तुडव ..	E 9.0	N.A.; 338; 74; 74; 5 ..	Sanguem; 9.0	Mormugao; 80.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
Sanvordem; N.A.	Quepem; 12.0	Quepem; 12.0; Sun.	W, pl.	..	tl.
Margao; N.A.	Sanquelim; 9.0	Sanquelim; 9.0; Mon.	W	3; Manganese	8Sl (pr); Cs; tl; mq.
Colem; 12.0	Ponda; 23.0	Ponda; 23.0; Wed. and Sat.	W, R.	..	4Sl (pr); Barabhumi Fr-Ps, 2tl; Shiv Mandir.
Colem; 57.0	Thana; 13.0	Valpoi; 22.0; Tue.	W.	..	Sl (pr), tl.
Margao; 2.0	Margao; 2.0	....	W, t.	..	3Sl (pr); Cpl.
Margao; 26.0	Agasaim; 5.0	....	W.	..	Cch.
Vasco-da-Gama; 5.0	Panaji; 5.0	....	W, p.	..	7Sl (5pr,m,h); 2Cs; St. Minguel Fs-Oct; 2tl, Cch; 4Cpl.
Margao; 18.0	Cuncolim; 5.0	Cuncolim; 5.0; Sun.	W, t, spr.	..	Sl (pr), Kalo Fr-Ps; Dassera; tl.
Margao; N.A.	Pernem; 9.0	Pernem; 9.0; Thu.	W.	..	2Sl(pr, m); tl.
Margao; 24.0	Ponda; 4.0	Ponda; 4.0; Wed. and Sat.	W, p.	..	2Sl (pr); Fr-Phg; 3tl; Cch.
Colem; 45.0	Local;	Valpoi; 9.0; Tue.	W.	..	2Sl (pr.); Dairy society; Laxmi Fr-Ps;2tl.
Margao; 15.0	Margao; 15.0	....	W.	..	tl.
....	Local; ..	Siroda; 4.0; Sun.	W, spr.	..	Sl(pr); Cch Fs-Mar; 2tl; mq; Tiracol fort.
Margao; 59.0	Mapusa; 9.0	Local; Sun ..	W.	..	6Sl(5pr, h); 3 clubs; St. Christopher Fs-Oct; St. Anne Fs-May; Cch; cvd; Dp; Church of Perpetual Succour.
Margao; 36.0	Ponda; 16.0	Banastarim; 2.0; Fri.	W, p.	1; Manganese.	Sl(pr); Cs; Fr-Mrg; 8tl.
Margao; N.A.	Pernem; 14.0	Pernem; 14.0; Thu.	W.	..	3Sl(pr); Cs; tl.
Sanvordem-Curchorem; 17.0	Sanguem; 9.0	Sanguem; 9.0; Sun.	R, t.	2; Iron ore.	Cs; tl.

Village/Town name in English; Taluka abbreviation ; Village, town name in Devnagari. 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households ; Agriculturists 3	Post office; Distance 4	Port/Wharf/ Jetty ; Distance 5
Tuem; PRN. तुये ..	S 7.0	1202; 1545; 293; 348; 368	Camurlim; 3.5	Bhandarwado; 3.0
Ucassaim-Paliem-Punola; BRD. उसकय-पालयें-पुनोळें	SE 2.5	468.8; 1799; 392; 396; 140	Mapusa; 2.5	Panaji; 14.0
Uguem; PRN. उगें ..	N 8.0	399.1; 851; 117; 163; 213	Pernem; 8.0	Caznem; N.A.
Uguem; SNG. उगे ..	S 2.0	N.A.; 1090; 220; 224; 89.	Sanguem; 2.0	Mormugao; 74.0.
Undorna, QP. उंडर्न ..	.. ..	N.A.; 147; 29; 29; 27 ..	Sanguem; 5.0	Betul; N.A.
Usgao; PND. उसगांव ..	NE 15.0	N.A.; 4664; 833; 849; 170	Local; ..	Local; ..
Ustem; STR. उष्टे ..	E 7.0	N.A.; 153; 27; 28; 14 ..	Valpoi; 7.0	Panaji; 67.0
Utorda; SLCT. उतुड्डे ..	NW 9.0	N.A.; 1727; 309; 454; 300	Majorda; 2.0	Mormugao; 21.0.
Vadi; PND. वाडी ..	S 5.0	147.7; 453; 87; 87; 72 ..	Ponda; 5.0	Durbate; 1.0
Vagurbem; PND. वागुर्मे ..	N 15.0	236; 536; 98; 100; 99 ..	Savoiverem; 5.0	Local; ..
Vaguriem; STR. वागुर्यें ..	S 11.0	220; 168; 27; 28; 22 ..	Onda; 7.0	Panaji; 58.0
Vainguinim; BCL. वायंगिणी.	W 4.5	68.5; 607; 110; 110; 74 ..	Bicholim; 4.5	Naroa; 2.0
Valpoi; STR. वाळपय | ..	.. ..	9.4 sq. kms.; 2922; 451; 469; 51.	Local; ..	Panaji; 52.0
Vanelim; SLCT. वाणेली ..	W 3.0	N.A.; 829; 156; 178; 8 ..	Margao; 3.0	....
Vantem; STR. वांतें ..	W 20.0	N.A.; 733; 144; 151; 151.	Birondem; 7.5	Panaji; 52.0
Varca; SLCT. वार्कें ..	S 11.0	N.A.; 3110; 1000; 900; 400,	Local;	....
Varconda; PRN. वरखंड ..	E 13.0	1126.9; 1333; 222; 250; 290.	Pernem; 13.0	Panaji; 31.0

Railway station; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
....	Camurlim; 3.5	Pernem; 7.0; Thu.	W.	2; Manganese.	5Sl(4pr, m); Tuem Fr-Dec; 7tl; Cch; HC.
Vasco-da-Gama; 30.0	Mapusa; 2.5	Mapusa; 2.5 Fri.	W.	..	3Sl(pr); Cs; tl; Cch.
Margao; N.A.	Pernem; 8.0	Pernem; 8.0; Thu.	W.	..	Sl(pr); tl.
Sanvordem-Curchorem; 10.0	Sanguem; 4.0	Sanguem; 4.0; Sun.	W, r.	3; Manganese.	2Sl(pr); Hemaddev Fr-Mg; Hemaddev tl.
Sanvordem; N.A.	Sanguem; 5.0	Sanguem; 5.0; Sun.	W.	..	Sl(pr).
Margao; 35.0	Ponda; 15.0	Local; Sun ..	W.	2; 1 Manganese; 1 Iron ore.	10Sl(8pr; 2h); 2 cons. Cs; Fr-Ps; 3 tl; SHC.
Colem; 35.0	Valpoi; 7.0	Valpoi; 7.0 Tue.	W.	..	Sl(pr).
Majorda; 2.0	Margao; 9.0	....	W, t.	..	Sl(pr); Lourdes Fs-Nov; Cch; Dp.
Margao; 25.0	Ponda; 5.0	Ponda; 5.0; Wed. and Sat.	W.	..	Sl(pr); Cs; Fr-Phg; tl.
Margao; 35.0	Ponda; 15.0	Usgao; 4.0; Sun.	W.	..	Sl(pr); Cs; Fr-Mrg; tl.
Margao; 53.0	Valpoi, 11.0	Valpoi; 11.0; Tue.	W.	..	....
Margao; N.A.	Local; ..	Bicholim; 4.5; Wed.	W, t.	..	Sl(pr); frp; Khetoba Fr-Fs; tl.
Colem; 48.0	Local; ..	Local; Tue ..	W, p.	..	4Sl(2pr; 2m); 3Cs; tl; mq; Dp; Vet. Dp; Cch.
Margao; 3.0	Margao; 3.0	....	W.	..	Cpl.
Colem; 30.0	Onda; 10.0	Sanquelim; 14.0; Mon.	W, t, spr.	..	2Sl (pr. m.); Shantadurga Fr-Ps; 2tl.
Margao; 11.0	Cavelossim; 6.0	....	W	..	3Sl(2pr, h); Cs; Fs-Nov.; St. Minguel Fs-May; Nossa Senhora-da Gloria Fs-Nov; Cch.
Margao; 61.0	Pernem; 13.0	Pernem; 13.0; Thu.	W, R, spr.	..	2Sl, (pr, m); Cs; 2tl; Maulidevi Fr-Ps; Ramnavami Fr-Ct.

Village/Town name in English; Taluka abbreviation; Village, town name in Devnagari 1	Direction; Travelling distance 2	Area (hectares); Pop; Houses; Households; Agriculturists 3	Post office; Distance 4	Port/Wharf/Jetty; Distance 5
Vasco-da-Gama; MRG. वास्को-द-गाम	....	11.7 sq. kms; 44065; 8850; 9200; 105.	Local;	Mormugao; 4.0
Vazri; PRN. वझरी ..	E 15.0	716; 1328; 188; 253; 359.	Colvale; 7.0	Panaji; 30.0
Velguem; BCL. वेळगें ..	E 16.0	322.4; 1578; 310; 328; 80.	Local;	....
Velguem; STR. वेळगें ..	S 6.0	N.A.; 791; 90; 95; 20.	Valpoi; 6.0	Panaji; 50.0
Velim; SLCT. वेळ्ळी ..	S 16.0	N.A.; 5052; 1500; 1600; 800.	Local;	Betul; 3.0
Velinga; PND. वेलिंग ..	NW 11.0	215.8; 1397; 227; 249; 190.	Mhardol; 3.0	Marcaim; 5.0
Velsao-Pale; MRG. वेळसांव-पाळें ..	S 13.0	N.A.; 2035; 389; 404; 27.	Cansaulim; 3.0	Mormugao; 13.0
Veluz; STR. वेळूज ..	N 1.7	N.A.; 665; 61; 118; 95 ..	Valpoi; 1.7	Panaji; 56.0
Verla; BRD. वेर्ले ..	W 2.0	435.3; 2570; 516; 545; 160.	Parra; 4.0	Panaji; 14.0
Verlem; SNG. वेर्ले ..	N 45.0	N.A.; 933; 176; 215; 280.	Netorlim; 12.0	Mormugao; 73.0
Verna; SLCT. वेर्णे ..	N 10.0	N.A; 4032; 838; 904; 600.	Local;	Mormugao; 26.0
Veroda; SLCT. वेरोडें ..	E 13.0	N.A.; 790; 208; 175; 225.	Cuncolim; 4.0	Mormugao; 48.0
Vichundrem; SNG. विचुंद्रें ..	N 20.0	N.A.; 501; 103; 103; 61.	Netorlim; 1.0	Mormugao; 65.0
Viliena; SNG. विळयेण ..	E 18.0	N.A.; 389; 17; 73; 82.	Sanguem; 18.0	Mormugao; N.A.
Virdi; BCL. विर्डी ..	S 12.0	308.8; 984; 131; 181; 107.	Sanquelim; 9.0	Amona; 2.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance ; Bazaar day	Drinking water facilities	No. of mines ; Type	Institutions and other information
6	7	8	9	10	11
Local; ..	Local; ..	....	W, p.	..	22Sl, (13pr, 2m, 7h); College, 9frp, Saptaha-Sra; 5tl; Cch; mq: 5H; 23Dp.
Margao; 65.0 ..	Pirna; 1.0	Per-nem; 15.0; Thu.	W, spr.	..	3Sl (2pr; m); Cs; tl; Cch;
Margao; 30.0 ..	Local;	Us-gao; 8.0; Sun.	W	2; Iron Ore.	2Sl,(pr, m); Cs; Maha-dev Fr; tl.
Colem; 16.0 ..	Valpoi; 6.0	Val-poi; 6.0; Tue.	R	..	Sl (pr); tl.
Margao; 16.0	Baradi-Betul; 2.5	Asso-lna; 3.0; Fri.	W, spr.	..	5Sl (2pr, m, 2h); Velim Fs-Dec; Cch.
Margao; 31.0 ..	Ponda; 11.0	Mhar-dol; 3.0; Mon.	W, t	..	2Sl(pr);Cs; 3tl; Narcinva tl; Narcinva Fr-Phg.
Cansaulim; 3.0	Cansau-lim; 3.0	....	W, t	..	3Sl(pr); Cs; tl;Cch;Cpl; Dp, Velsao beach.
Colem; 52.0 ..	Valpoi; 1.7	Val-poi; 1.7; Tues.	W	..	2Sl (pr); tl.
....	Mapusa; 2.5	Ma-pusa; 2.5; Fri.	W	..	3Sl (2pr, m); Santeri Fr-Ps; tl; Cch; Cvd.
Sanvordem; 33.0 Curchorem;	Sang-uem; 45.0	San-guem; 45.0; Sun. and Wed.	W	15; 5 Man-ganese, 10 Iron Ore	Sl (pr); Chandreshwar Fr, 2tl.
Cansaulim; 5.0	....	....	W	..	4Sl, (3pr, h); Cs; St. Michael Fs-Jan; St. Guia Fs-Nov; Cch; tl; H; Verna tank.
Margao; 13.0	Cun-colim; 4.0	Cun-colim; 4.0; Sun.	W, spr.	..	2Sl (pr); Kalo Fr-Mrg; tl.
Sanvordem-Curchorem; 25.0	San-guem- 20.0	San-guem; 20.0; Sun. and Wed.	spr.	7; Man-ganese.	Sl (pr); Chandreshwar Fr; Betal Fr-Mg; 2tl.
Curchorem; 29.0	San-guem; 18.0	San-guem; 18.0; Sun.	W, R, t	3; Iron ore	Sl(pr); Cs; Siddhanath Fr-Ps; 3tl.
Margao; 40.0	San-quelim; 9.0	San-quelim; 9.0; Mon.	W	2; 1 Man-ganese, 1 Iron ore.	3Sl (2pr, m); Mahadev Fr; 3tl.

Village/Town name in English ; Taluka abbreviation ; Village, town name in Devnagari	Direction; Travelling distance	Area (hectares); Pop Houses ; Households ; Agriculturists	Post office; Distance	Port/Wharf/ Jetty ; Distance
1	2	3	4	5
Virnora; PRN. विर्नोडें ..	S 8.0	381.8; 856; 133; 175; 163	Pernem; 8.0.	Dargalim; 4.0
Volvoi; PND. वळवय ..	N 19.0	109.2; 1763; 284; 327; 118.	Savoi-Verem; 3.0	Local;
Xeldem; QP. षेळडें ..	N 3.0	N.A.; 2151; 447; 447; 415.	Quepem; 3.0	Betul; N.A.
Xelop-Buzroco; STR. षेळप-बुद्रुक ..	N 10.0	N.A.; 167; 38; 40; 25	Valpoi; 10.0	Panaji; 55.0
Xelop-Curdo; STR. षेळप-खुर्द ..	S 10.0	N.A.; 141; 31; 33; N.A.	Birondem; 6.0.	Panaji; 56.0
Xelvona; QP. षेळवण ..	N 9.0	N.A.; 872; 153; 162; 65	Quepem; 9.0.	Betul; N.A.
Zadani; STR. झाडानी ..	E 19.0	N.A.; N.A.; N.A.; N.A.; N.A.;	Valpoi; 19.0	Panaji; 67.0
Zanodem; QP. जानोडें	.. ..	N.A.; 309; 50; 50; 35	Sanguem; 5.0.	..
Zarmem; STR. झर्मे ..	W 7.0	N.A.; 373; 73; 77; 116	Valpoi; 7.0	Panaji; 50.0

Railway station ; Distance	Motor stand; Distance	Weekly Bazaar; Distance; Bazaar day	Drinking water facilities	No. of mines; Type	Institutions and other information
6	7	8	9	10	11
....	Pernem; 8.0	Pernem; 8.0; Thur.	W ..	..	6Sl (5pr,m); Cs; Dassera-An; 12tl; HC.
Margao; 39.0 ..	Ponda; 19.0	Banastarim; 12.0; Fri.	W ..	..	4Sl (3pr, m); Fr-Kt; 2tl; SHC.
Margao; N.A.	Quepem; 3·0	Quepem; 3.0; Sun.	W ..	..	2Sl (pr).
Colem; 45.0. ..	Valpoi; 10·0	Valpoi; 10.0; Tue.	W ..	..	Sl (pr); tl.
Colem; 45.0	Valpoi; 10·0	Valpoi; 10.0; Tue.	W ..	..	..
Sanvordem- 5.0. Curchorem;	Quepem; 9.0.	Quepem; 9.0; Sun.	W ..	..	2Sl (pr).
Colem; 35.0	Sonal; 12.0	Valpoi; 19.0; Tue.	R ..	..	
Sanvordem; N.A.	Sanguem; 5·0	Sanguem; 5.0; Sun.	W ..	..	Sl (pr)
Colem; N. A.	Valpoi; 7·0	Valpoi; 7.0; Tue.	W ..	..	Sl(pr); Kelbai Kalo-Mg; tl.

A LIST OF SPELLINGS OF PLACE NAMES

GOA DISTRICT

Spellings of place names as approved by the Government of the Union Territory of Goa, Daman and Diu (As adopted in the Gazetteer Volume).	Spellings of place names as approved by the Survey of India.	Spellings of place names as approved by the General Advisory Body of the Goa Gazetteer Editorial Board.	Spellings of place names as written in Devnagari.
1	2	3	4
Adcolna	....	Hadkalan	हडकोळण
Adnem	....	Adne	अडणे
Adsulim	....	Adsuli	अडसुली
Advoi	Advai	Advai	अडवय
Adwalpale	Advalpal	Advalpal	अडवलपाल
Agarvado	Ag rvada	Agarvada	आगरवाडा
Aglote	....	Aglot	आगलोट
Agonda	Agonda	Agond	आगोंद
Aldona	Aldona	Haldone	हळदोणें
Alorna	Alorna	Halarn	हळर्ण
Ambarim	Ambari	Ambadi	आंबाडी
Ambaulim	Ambavali	Amole	आमोलें
Ambedem	Ambede	Ambede	आंबेडें
Ambeli	Ambeli	Ambel	आंबेली
Ambelim	....	Ambeli	आंबेली
Amberem	....	Ambede	आंबेडे
Amona	Amona	Amone	आमोणें
Anjediva	Anjadip	Anjdiv	आंजेदीव
Anjuna	Anjuna	Hanzun	हणजूण
Anjunem	....	Hanzune	हणजुणे
Ansolem	....	Asolye	असोळये
Antoriem	....	Han'arye	हांतरये
Aquem	Aken	Ake	आके
Arambol	....	Harmal	हरमल
Arossim	Arosin	Arosi	आरोसी
Arpora	....	Hadphade	हडफडें
Arvalem	....	Harvale	हरवळें
Assagao	Asgaon	Asgaon	आसगांव
Assodem	....	Asode	असोडें
Assolda	....	Asolde	असोळडें
Assolna	Assolna	Asolne	असोळणें
Assonora	Asnoda	Asnode	अस्नोडें
Aturli	....	Haturli	हातुर्ली
Avedem	Aveden	Avede	अवेडें
Azossim	....	Adoshi	आडोशी

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1	2	3	4
Bai-guinim	....	Baingini	बायंगिणी
Bali	Bally	Balli	बाळ्ळी
Bambolim	Bambolin	Bamboli	बांबोळी
Bandoli	....	Bandoli	बांदोली
Bandora	Bendode	Bandode	बांदोडे
Bastora	Bastora	Bastode	बस्तोडे
Barcem	....	Barshe	बार्से
Bati	Bhati	Bhati	भाटी
Batim	Bhati	Bhati	भाटी
Benaulim	Benavli	Banavali	बाणावली
Bendordem	....	Benudde	बेंदोडें
Betalbatim	....	Betalbhati	बेताळभाटी
Betora	Betora	Betode	बेतोडें
Betqui	....	Betki	बेतकी
Bicholim	Dicholi	Dicholi	डिचोली
Bi ondem	Bhironde	Bhironde	भिरोंडे
Boma	Bhoma	Bhoma	भोम
Bombedem	Bombede	Bombede	बोंबेडें
Bordem	Borde	Bodde	बोडें
Borim	....	Bori	बोरी
Britona (Penha-da Franca)	....	Bitthon	बिठ्ठोण
Buimpale	....	Bhuipal	भुईपाल
Cacora	Kakoda	Kakode	काकोडें
Calangute	Kalangut	Kalangut	कळंगूट
Calapur	Kalapur	Kalapur	कालापूर
Calata	....	Kalat	कालट
Calem	Kale	Kale	काले
Calvim	Kalvi	Kalvi	कालवी
Camarconda	....	Kamarkhand	कामरखांड
Camorlim	Kamurli	Kamurli	कामुर्ली
Camurlim	Kamurli	Kamurli	कामूर्ली
Canacona	Kankon	Kankon	काणकोण
Canca	....	Kanke	काणकें
Candeapar	Khandepar	Khandepar	खांडेपार
Candola	....	Khandole	खांडोळें
Candolim	Kandoli	Kandoli	कांदोळी
Cansarvornem	Kasarvarne	Kamsarvarnem	कासरवर्णे
Cansaulim	Kansavlim	Kansauli	कांसावली
Caorem	....	Cavrem	कावरें

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1	2	3	4
Caorim	....	Kaori	कावोरी
Capao	....	Kapao	कापांव
Caraim	....	Karai	कारई
Carambolim	....	Karmali	करंबळी
Carambolim-Brama	Karambali Bramha	Brahmyachi Karmali	कर्मळी ब्रह्मा
Carambolim-Buzruco	....	Karmali Budruk	करंबळी बुद्रुक
Caranguinim	....	Kangini	कणगिणी
Caranzol	Karanzol	Karanzal	करंझळ
Carapur	Karapur	Karapur	कारापूर
Carmona	Karmane	Karmane	कर्मणे
Cavelossim	Kalshi	Kellshi	केळशी
Cavorim	....	Kavori	कावोरी
Caznem	....	Kasne	खाजनें
Cazur	Kazur	Kazur	काजूर
Chaifi	....	Chaiphi	चायफी
Chandel	Chandel	Chandel	चांदेल
Chandor	Chandar	Chandar	चांदर
Chauri	Chauri	Chavdi	चावडी
Chicalim	Chikli	Chikhli	चिखली
Chicolna	Chikolna	Chicolna	चिकोळण
Chimbel	Chimbel	Chimbal	चिंबल
Chinchinim	Chinchinim	Chinchone	चिंचोणे
Chopdem	Chopada	Chopde	चोपडें
Chorao	....	Chodan	चोडण
Choraundem	....	Charavane	चोरावंडें
Codal	Kodal	Kodal	कोडाळ
Codar	Kodar	Kodar	कोडार
Codiem	....	Khodye	खोड्यें
Codli	....	Kodli	कोडली
Codqui	....	Khadki	खडकी
Codvol	....	Kadval	कडवळ
Cola	Kola	Khol	खोल
Colem	....	Kule	कुळें
Colomba	Kolamb	Kolamb	कोळंब
Colva	Kolva	Kolve	कोलवें
Colvale	Kolval	Kolval	कोलवाळ
Compordem	....	Komparde	कोपर्डे
Comproi	....	Komprai	कोंप्रय

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1	2	3	4
Conquirem	....	Kankire	कणकिरें
Consua	....	Konsua	कोणसुवा
Conxem	Konsen	Konshe	कोनशें
Cordem	....	Khadde	कोर्डें
Corgao	Korgaon	Korgaon	कोरगांव
Corjuem	Khorjuven	Khorjuve	खोरजुवें
Corla	....	Karl	कोर्ल
Corlim	Korlim	Khorli	खोर्ली
Cormonem	Karmane	Karmane	कर्मणें
Cortalim	Kortali	Kutthal	कुठ्ठाळ
Costi	....	Kashti	कष्टी
Cotarli	....	Kotarli	कोटार्ली
Cotigao	Khotigaon	Khotigaon	खोतिगांव
Cotombi	Kotambi	Kothambi	कोठंबी
Coturem	....	Khotode	खोतोडें
Cudcem	....	Kudshe	कुडशें
Cudnem	....	Kudne	कुडणे
Cuelim	Kuyelim	Kuveli	कुवेली
Cujira	....	Kujir	कुजरा
Cumarconda	....	Kumarkhand	कुमारखंड
Cumbari	Kumbharin	Kumari	कुंमारी
Cumbarjua	Kumbharjuven	Kumarzuve	कुमारजुवे
Cunchelim	....	Kucheli	कुचेली
Cuncoliem	Kunkalli	Kunkalye	कुंकळ्ये
Cuncolim	Kunkalli	Kunkalli	कुंकळ्ळी
Cundaim	....	Kundai	कुंडय
Curca	Kurka	Kudak	कुडक
Curchirem	....	Kudchire	कुडचिरें
Curchorem	Kudchanden	Kudchade	कुडचडें
Curdi	....	Kurdi	कुर्डी
Curpem	Kurpe	Kurpe	कुर्पे
Curti	Kurti	Kutti	कुर्टी
Curtorim	Kurtorin	Kudtari	कुडतरी
Cusmane	....	Kusman	कुस्मण
Dabem	....	Dabe	दाबें
Dabolim	Dabolim	Daboli	दाबोळी
Damocem	....	Dhamshe	धामोशें
Darbandora	Darbandara	Dharbandode	धारबांदोडें
Dargalim	Dhargal	Dhargal	धारगळ

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Davem	Dhave	Dhave	धावे
Davorlim	Daorlin	Davorli	दवरली
Deao	....	Deao	दिवाण
Derodem	....	Derode	देरोडे
Deussua	Devsua	Devsua	देवसुवा
Dicarpalo	....	Dikarpal	दिकारपाल
Dongor	....	Dongar	डोंगर
Donguirom	....	Dongire	डोंगीरें
Dongurli	....	Dongurli	डोंगर्ली
Dramapur	Dramapur	Dharmapur	धर्मापूर
Dudal	Dudal	Dudhal	दुधाळ
Dumacem	Dumase	Dhumashe	धुमाशे
Duncolim	....	Dhunkali	धुंकळी
Durbate	Durbhat	Durbhat	दुर्भाट
Durgavado	....	Durgavadi	दुर्गावाडी
Edorem	....	Hedode	हेदोडें
Ella	Vela Goa	Yela	येला
Fatorpa	Fatarpa	Fatarpe	फातर्पे
Gancim	....	Ganvshi	गांवशी
Gandaulim	Gaondali	Ganvadal	गांवडाळ
Gangem	....	Ganje	गांजे
Gaodongrem	Gaundongrem	Gaondongre	गांवडोंगरें
Goalim-Moula	....	Goali-Moule	गोळया-मौळा
Goa-Velha	Vela Goa	Vodle Goe	पोरले गोंयें
Gocoldem	Gokole	Gokolde	गोकोळडें
Golauli	....	Golavli	गोळावली
Goltim	Goltim	Golti	गळटी
Gonteli	Ghonteli	Ghonteli	घोंटेली
Govanem	....	Govane	गोवणें
Guirdolim	Girdolin	Girdoli	गिर्दोली
Guirim	....	Girvade	गिर्दी
Guleli	....	Guleli	गवळुली
Gululem	....	Gullo	गुळ्ळें
Ibrampur	Ibrampur	Ibrampur	इब्रामपूर
Isorcim	....	Isarshi	इसर्वे
Ivrem Buzruco	....	Hivare Budruk	हवरें बुद्रुक
Ivrem Curdo	....	Hivare Khurd	हवरें खुर्द
Jua	....	Juve	जुवें
Lamgao	....	Lamgaon	लामगाव

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Latambarcem ..	....	Lathambarshe ..	लाटंबार्से
Loliem ..	Loliem ..	Lolye ..	लोल्ये
Loutulim ..	....	Lotli ..	लोटली
Macasana ..	Makazan, Maksan	Makhzan ..	माखजन
Maem ..	Mayem ..	Maye ..	मये
Maina ..	Mayna ..	Mayna ..	मायंण
Majorda ..	Majorda ..	Mazodde ..	माजोर्डे
Malar ..	....	Malar ..	माळार
Maloli ..	....	Maloli ..	माळोली
Malpona ..	....	Malpan ..	मळपण
Mandrem ..	Mandre ..	Mandre ..	मांद्रे
Mandur ..	Mandur ..	Mandur ..	मांडूर
Mangal ..	....	Mangal ..	मांगाळ
Mapusa ..	Mapuca ..	Mhapse ..	म्हापसे
Marcaim ..	Madkai ..	Madkai ..	मडकय
Margao ..	Madgaon ..	Madgaon ..	मडगांव
Marna ..	....	Marne ..	मार्ने
Massordem ..	....	Masorde ..	मासोर्डे
Maulinguem ..	Mavelinge ..	Mavlinge ..	मावळींगे
Mauzi ..	....	Mhaus ..	माऊस
Melauli ..	....	Melavali ..	मेळावली
Mencurem ..	....	Menkure ..	मेणकुरे
Mercurim ..	....	Mercuri ..	मेरकुरे
Moira ..	Mayda, Molde ..	Mayade ..	मयडे
Moissal ..	....	Mhaisal ..	मैसाळ
Moltem ..	....	Mayte ..	मयटे
Molcarnem ..	....	Malkarne ..	मळकर्णे
Molcopona ..	....	Malakpan ..	मळकपण
Molem ..	Molem ..	Male ..	मळे
Mopa ..	Mopa ..	Mop ..	मोप
Morambim-o-Grande (Merces)	Morambi (Meral)	Vodli Morambi ..	वोडली मोरंबी
Morambim-o-Pequeno .. (Merces).	Morambi (Mersi)	Dhakti Morambi	धाकटी मोरंबी
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Mormugao Port ..	Marmagao ..	Murgaon	मुरगांव
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Muguli ..	....	Mugulli	मुगुळी

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Mulem	....	Mule	मुळें
Mulgao	....	Mulgaon	मुळगांव
Murda	Murida	Muddi	मुड्डी
Nachinola	....	Naanode	नाचनोडें
Nadora	Nadode	Nanode	नानोडें
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Nagoa	Nagowa	Nagve	नागवें
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Nagvem	....	Nagve	नागवें
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Naneli	....	Naneli	नानेली
Nanora	Nanoda	Nanode	नानोडें
Nanorem	Nanode	Nanode	नानोडें
Nanus	Nanuz	Nanus	नानूस
Naquerim	Nakeri	Nakeri	नाकेरी
Naroa	Narvem	Narve	नार्वे
Navelim	Naveli	Naveli	नावेली
Nerul	Nerul	Nerul	नेरुल
Netorli	Netravli	Netarli	नेतर्ली
Neura-o-Grande	Nevra	Vodle Nevre	व्हडलें नेवरें
Neura-o-Pequeno	Nevra	Dhakte Nevre	धाकटे नेवरें
Nirancal	Nirancala	Nirankal	निरंकाल
Nundem	....	Nunde	नुंदें
Nuvem	Nuven	Nuve	नुवें
Odar	....	Hodar	होडार
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Ona	....	Van	वन
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Orgao	....	Vargaon	वरगांव
Orlim	....	Odli	वोडली
Oxel	Oshal	Oshel	वोशेल
Ozorim	Vajri	Vazri	वझरी
Padeli	....	Padeli	पाडेली
Padi	Padi	Padi	पाडी
Pale	Palen	Pali	पाळी
Paliem	Palaye	Palye	पालयें
Panaji	Panaji	Panaji	पणजी
Panelim	....	Panvel	पानवेल
Parcem	Parse	Parshem	पार्से

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Paroda	.. Paroda	.. Padde	.. पारोडें
Parra	.. ....	Parra	.. पर्रा
Patiem	.. ....	Patye	.. पाट्यें
Pendral	.. ....	Pendal	.. पेंडाल
Pernem	.. Perne	. Pedne	.. पेडणें
Pilerne	.. Pilerne	.. Pilarn	.. पिळर्ण
Piliem	.. ....	Pilye	.. पिळ्यें
Piligao	.. Piligaon	.. Pilgaon	.. पिळगांव
Pirla	.. Pirl	.. Pirl	.. पिर्ल
Pirna	.. Perne	.. Pirna	.. पिर्ण
Pissurlem	.. Pissurle	.. Pissurle	.. पिसुर्ले
Pomburpa	.. Pomburpa	.. Pomburpe	.. पोंबुर्पें
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Podocem	.. ....	Podashe	.. पोडशें
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Ponolem		.. Panole	.. पणोळें
Ponsuli	.. Pansulen	.. Panasuli	.. पणसुली
Poriem	.. Pariye	.. Parye	.. पर्ये
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Potrem	.. ....	Patre	.. पत्रें
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Punola	.. Ponolen	.. Punole	.. पुनोळें
Quedem	.. ....	Khede	.. केडें
Quelaudem	.. Kalvaden, Kalevadi	Kelavde	.. केळावडें
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Quepem	.. Quepem	.. Kepe	.. केपें
Querim	.. ....	Keri	.. केरी
Queula	.. Kevlan	.. Kavle	.. कवळें
Quisconda	.. ....	Kiskon	.. किस्कोण
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Rachol	.. Rashol(Raitur) ..	Raitur	.. रायतूर
Raia	.. Ray	.. Raya	.. राय
Ravona	.. ....	Ravan	.. रावण
Reis Magos	.. Ralji-Magus	.. Reis Magos	.. रेसमाग
Renovadi	.. ....	Ranvadi	.. रेनावडें
Revora	.. Revora	.. Revode	.. रेवोडें

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Rivem ..	....	Riye ..	रिवें
Rivona ..	Rivon ..	Rivan ..	रिवण
Rumbrem ..	....	Rumde ..	रुमडें
Salaulim ..	Salavli ..	Salauli ..	साळावली
Saleli ..	....	Salai ..	साळय
Salem ..	Sal ..	Sal ..	साळ
Saligao ..	Saligao ..	Salgaon ..	साळगांव
Salvador do Mundo ..	....	Salai ..	साळय
Sancoale ..	Sankawali ..	Sankval ..	सांकवाळ
Sancordem ..	Sakvorde ..	Sankorde ..	सांकोर्डें
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Sigonem .	....	Shingone ..	शिगोणे
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Siroda ..	Shiroda ..	Shirode ..	शिरोडें
Siroli ..	....	Shiroli ..	शिरोली
Sirsaim ..	....	Shirsai ..	शिरसई
Sirsode ..	....	Shirsode ..	शिरसोडें
Sirvoi ..	....	Shirvai ..	शिरवय

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Socorro ..	....	Sukur ..	सोकोर्ये
Sonal ..	....	Sonal ..	सोनाळ
Sonauli ..	Sanavalin ..	Sonavali ..	सोनावळी
Sonus-Vonvollem ..	....	Sonshi ..	सोनशी
Sulcorna ..	Surkarn ..	Sulkarn ..	सुळकर्ण
Surla ..	....	Surla ..	सुर्ल
Talaulim ..	Talavli ..	Talauli ..	तळावली
Taleigao ..	Talgaon ..	Talgaon ..	ताळगांव
Talvorda ..	....	Talvade ..	तळवडें
Tamboxem ..	Tambose ..	Tamboshe ..	तांबोशें
Telaulim ..	....	Talauli ..	तळावली
Tiloi ..	....	Telloi ..	तिळय
Tiracol ..	Terekhol ..	Terekhol ..	तेरेखोल
Tivrem ..	....	Tivre ..	तिवरे
Tivim ..	Tivi ..	Thiye ..	थिवीं
Torxem ..	Torse ..	Torshe ..	तोर्शें
Tudou ..	....	Tudav ..	तुडव
Tuem ..	....	Tuye ..	तुयें
Ucassaim ..	Uskai ..	Uskay ..	उसकय
Uguem ..	Ugen ..	Uge ..	उगें
Undorna ..	....	Hunanna ..	उंडणं
Usgao ..	Usgaon ..	Usgaon ..	उसगांव
Ustem ..	....	Uste ..	उस्टें
Utorda ..	Utarda ..	Utadde ..	उतड्डें
Vadem ..	Vaden ..	Vadem ..	वाडें
Vadi ..	....	Vadi ..	वाडी
Vagurbem ..	....	Vagurme ..	वागुर्मे
Vaguriem ..	Vageri ..	Vagure ..	वागुर्ये
Vainguinim ..	Vayangani ..	Vaingini ..	वायंगिणी
Valpoi ..	Valpoy ..	Valpai ..	वाळपय
Vanelim ..	Vanelin ..	Vaneli ..	वाणेली
Vantem ..	....	Vante ..	वाण्टें
Varca ..	Varka ..	Varke ..	वार्कें
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Varoda ..	Verde ..	Vedde ..	वेरोडें
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Xeldem ..	....	Shelde ..	शेळडें
Xelop-Buzruco ..	....	Shelap Budruk ..	शेळप बुद्रुक
Xelop-Curdo ..	....	Shelap Khurd ..	शेळप खुर्द
Xelpem ..	Shelpi ..	Shelpe ..	शेळपे
Xelvona ..	....	Shelvan ..	शेळवण
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